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PART 2

Chromatic Harmony and Form

Chapter 17

Secondary Dominants I

CHROMATIC HARMONY

So far we have studied only chords constructed with pitches from the diatonic major or minor scales. The different types of minor scale (natural, melodic, and harmonic) are all considered diatonic in spite of the various alterations of $\hat{6}$ and $\hat{7}$. The only true **chromatic tones** (foreign to the diatonic scale being used) we have encountered are chromatic non-chord tones (NCTs) such as neighbor notes (NNs) and passing tones (PTs), and these are purely melodic in nature.

Beginning with this chapter, and for the remainder of the book, we will study **chromatic harmony**, that is, harmony in which chromatic alterations other than NCTs are introduced. At times these alterations result from **modulation**, the establishment of a new, different key. When music modulates, a new scale (with different accidentals than the original scale) is used, and this produces chromaticism with respect to the original key. The fragment in example 17.1a begins in DM and ends in Bm. The accidental in the second phrase, A‡, is the leading tone (LT) in the new key and results from the switch to the Bm scale.

Chromaticism, however, is very often present within a single key, resulting from **chromatic**, or **altered**, **chords**, chords that use a tone or tones foreign to the diatonic scale of the key they are used in. The passage in example 17.1b is all in Em, and yet in m. 7, beat 4, we see a chord that includes an A^{\sharp} and a C^{\sharp} . Although these two pitches are part of a chord (A^{\sharp} — C^{\sharp} —E—G), this type of chromaticism is often a consequence of melodic, linear processes. Chordal chromaticism often results from a linear elaboration of a diatonic framework. Example 17.1c shows the diatonic framework the chorale phrase in example 17.1b elaborates. In this context, we see that the chromatic chord results from a chromatic passing-tone motion in the bass $(\hat{4}$ — $\hat{5}$ — $\hat{1}$ becomes $\hat{4}$ — $\hat{4}$ — $\hat{5}$ — $\hat{1}$).

As illustrated in example 17.1, chordal or linear chromaticism may be used at the local level to provide pitch variety and to increase tonal "color" (the term *chromaticism* is derived from the Greek *chroma*, "color"). Moreover, chromaticism enhances voice-leading tension and direction. In example 17.1a, the A-A# line produces a strong pull

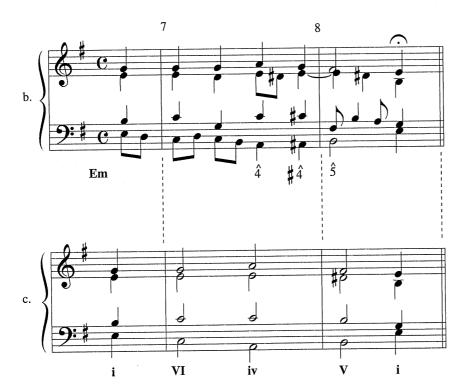


J. S. Bach, Chorale 80, "O Haupt voll Blut und Wunden," mm. 1-4



Examples 17.1b and c

J. S. Bach, Chorale 167, "Du grosser Schmerzensmann," mm. 7–8, and Harmonic Reduction of Example 16.1b



toward B, the new tonic. In example 17.1b, the bass motion $\hat{4}$ – $\hat{4}$ – $\hat{5}$ is much stronger linearly than only $\hat{4}$ – $\hat{5}$. Long-range chromaticism as represented by modulation, on the other hand, is an essential type of tonal process whose function is to define formal organization, as we will study in future chapters.

TONICIZATION: SECONDARY DOMINANTS

The first type of chromatic chord we will study results from the concept of **tonicization:** Any major or minor triad may become a momentary tonic if it is preceded by its dominant (that is, by the major triad or Mm_7 chord whose root is a 5th above—or a 4th below—the root of the tonicized chord). The fragment in example 17.2 is in CM throughout. The GM chord (V) in m. 1, beat 3, however, is preceded by its dominant (a Mm_7 chord on D, V_7 of G). Although we still hear the G chord as V in C (a half cadence), V is here momentarily tonicized because of the preceding chord.

Such dominant chords, whose function is to tonicize the triad that follows, are known as **secondary dominants** (some authors also call them **applied dominants**). Their Roman numeral (RN) abbreviation includes two symbols separated by a slash, as in V_7/V or V_7/IV . The first symbol indicates the secondary dominant function; the second symbol after the slash indicates the triad being tonicized. We read the slash as "of," thus V_7/V is " V_7 of V," and V_7/IV is " V_7 of V." Although secondary dominants may appear as simple M triads (V/V of V/IV), most often they appear as Mm₇ chords (V₇/V).

Spelling Secondary Dominants

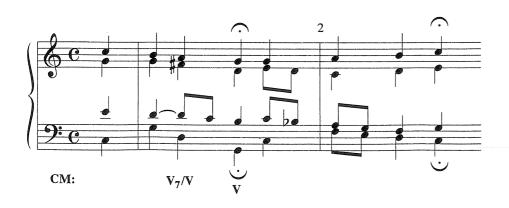
To spell the secondary dominant of a given degree, you build a M triad or a Mm_7 chord on the pitch a 5th above the given degree. Let's spell V_7/V in GM. The triad we are tonicizing is \hat{S} in GM, and the degree we are tonicizing is \hat{S} in GM, or D. That is, D becomes our momentary tonic. Think of the pitch a 5th above D. It is A (the dominant of D). Now build a Mm_7 chord on A: A-C#-E-G. This is V_7/V in GM.

We can now try V_7/VI in Cm. VI in Cm is a triad on A^{\downarrow} , so we are tonicizing A^{\downarrow} . The pitch a 5th above A^{\downarrow} is E^{\downarrow} . Now build a Mm_7 chord on E^{\downarrow} , and that will be V_7/VI in Cm: $E^{\downarrow}-G-B^{\downarrow}-D^{\downarrow}$.

Let's finish with a quick review of the process. We want V_7/ii in DM. We are tonicizing $\hat{2}$ in DM, or E. The pitch a 5th above E is B. The Mm₇ chord on B is B–D#–F#–A. This is V_7/ii in DM.

Example 17.2

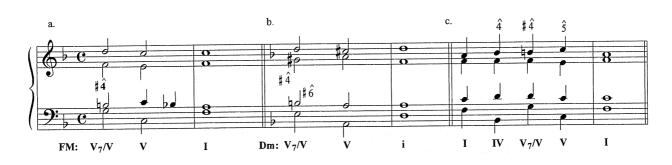
J. S. Bach, Chorale 40, "Ach Gott und Herr," mm. 1–2

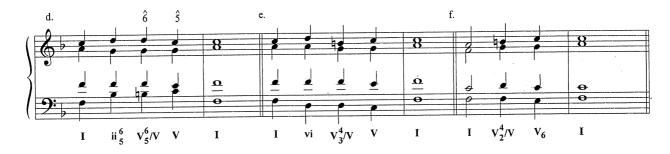


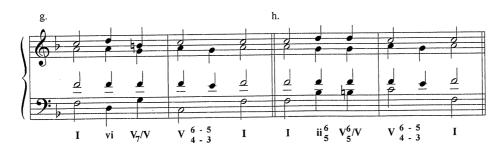
V₇ OF V

The degree most frequently tonicized is $\hat{5}$. V_7/V , the dominant of the dominant, is a Mm_7 chord built on $\hat{2}$ (the pitch a 5th above $\hat{5}$). The first "harmonic" accidental we introduce, as part of this chord, is $\sharp \hat{4}$ (by " $\sharp \hat{4}$ " we mean "raised $\hat{4}$," regardless of whether the actual accidental is \sharp or \S). $\sharp \hat{4}$ in this chord functions as a **secondary**, or *temporary*, **leading tone** of $\hat{5}$, and hence should not be doubled. Secondary dominants, in principle, resolve as regular dominant seventh chords (LT up, seventh down), so $\sharp \hat{4}$ will move to $\hat{5}$. Examples 17.3a and b illustrate the spelling and resolution of V_7/V in a major and a minor key. Notice that in minor, besides $\sharp \hat{4}$, we also need to raise $\hat{6}$ to $\sharp \hat{6}$, in order to have a Mm_7 sonority. Examples 17.3c to f present all the positions of V_7/V in the context of characteristic progressions. V_7/V , as well as V_5^6/V and V_3^4/V , can resolve to a V embellished by a cadential $\frac{6}{4}$, as illustrated by examples 17.3g and h.

🗼 Example 17.3







In example 17.3 you can see a frequent melodic gesture that can be harmonized with a progression using V_7/V , $\hat{4}$ — $\hat{\sharp}\hat{4}$ – $\hat{5}$. Other possible melodic fragments that can be harmonized with a secondary dominant of V and its resolution to V are $\hat{6}$ – $\hat{5}$, $\hat{1}$ – $\hat{7}$, and $\hat{2}$ – $\hat{2}$ (which can be harmonized with an inverted secondary dominant of V). Among these, $\hat{\sharp}\hat{4}$ – $\hat{5}$, $\hat{6}$ – $\hat{5}$, and $\hat{1}$ – $\hat{7}$ can also be found as bass fragments in one of the progressions using an **inversion of V**₇/V, as you can verify in example 17.3.



EXERCISES

To practice spelling secondary dominants of V in root position and inversions, refer to exercise 2 in worksheet 17 at the end of this chapter.

To practice spelling and resolving secondary dominants of V, refer to exercise 3 in worksheet 17 at the end of this chapter.

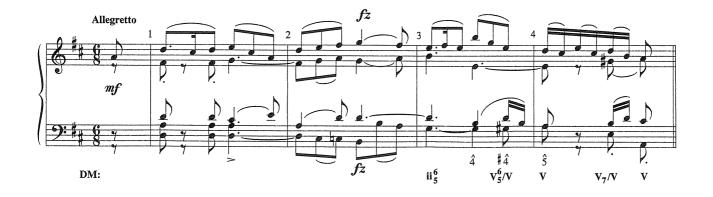
 V_7/V in root position is often found in cadential gestures. In example 17.3c, V_7/V precedes an authentic cadence. The bass $\hat{2}$ – $\hat{5}$ – $\hat{1}$, a very strong cadential gesture that we have previously harmonized diatonically as ii (or ii₇)–V–I, is strengthened by the chromatic tension provided by $\sharp \hat{4}$. As you will see, ii₇ and V_7/V differ only in one pitch: $\hat{4}$ in ii₇, or $\sharp \hat{4}$ in V_7/V . In this context, V_7/V functions as a chromatic pre-dominant chord.

In example 17.4 Haydn closes the phrase on a half cadence (HC), preceded by V_7/V that functions, in the way we have just discussed, as a chromatic pre-dominant chord. In m. 3 we see another very frequent form of the secondary dominant of $V: V_5^6/V$, which allows for the strong linear motion $\hat{4}$ — $\hat{\sharp}\hat{4}$ — $\hat{5}$ in the bass. If V_5^6/V is preceded by ii $_5^6$, no motion is needed in any voice other than the bass chromaticism (see example 17.3d). The function of this type of secondary dominant is not harmonic, but rather linear, V_5^6/V is here a chromatic, embellishing chord with a passing function.

Because in V_2^4/V $\hat{1}$ is in the bass, the chord can be effectively used after I, with $\hat{1}$ carried over in the bass as a common tone between the two chords. Mozart does just that at the beginning of his Finale for Symphony no. 40, reproduced in example 17.5. Compare Mozart's opening progression (mm. 1–4) with example 17.3f (and remember that V_2^4/V



J. Haydn, String Quartet op. 76, no. 5, I, mm. 1-4



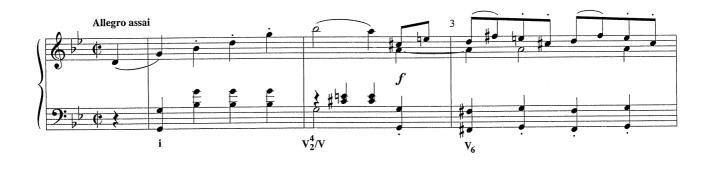
VOICE-LEADING GUIDELINES

- 1. The principles for doublings and resolution that we applied to the dominant seventh chord also apply to secondary dominants.
- 2. Do not double the secondary LT ($\$\hat{4}$ in V_7/V).
- 3. Resolve the secondary LT up and the seventh down.
- 4. Cross relations. You may have observed that in examples 17.1a and b and example 17.4, at least one of the voices moves by chromatic half step (as in A-A# or C-C#). When two adjacent chords include pitches related by chromatic half step, it is better to keep the chromatic motion in the same voice. Chromatically related pitches in different voices create what are known as cross relations. Although cross relations are found in music, they have not been used indiscriminately by composers. Because cross relations produce a dissonant clash between two voices, and because the smoothest voice leading results from keeping the chromatic motion in the same voice, as a principle we will avoid cross relations between outer voices.
- Sing or play the progressions in example 17.7, and hear the chromatic relationships among voices. Examples 17.7a and c illustrate cross relations between the outer voices. Listen to these realizations and compare them with the smoother realizations presented in examples 17.7b and d. Although in example 17.7b the cross relation between outer voices remains, its effect is softened by the chromatic motion in the bass.
- 5. The chromaticized voice exchange. The progression in example 17.7e shows a specific type of cross relation that, besides being quite acceptable, actually resuits in an especially effective voice leading. Notice the voice exchange between the figures D−B\(\daggerapprox\) in the soprano and B\(\daggerapprox\) D in the bass, indicated by the usual voice exchange cross. This is a chromaticized voice exchange that includes a cross relation (B\(\daggerapprox\) B\(\daggerapprox\)). As shown in our example, this progression is often embellished with a passing \(^6_4\), which makes the cross relation even less problematic.

resolves to V_6). Analyze Mozart's second phrase (mm. 5–8) harmonically. What kind of phrase structure can you identify in the complete passage? In the phrase by Andrew Lloyd Webber (example 17.6), on the other hand, V_2^4/V results from a passing motion in the bass (D–C–B, or $\hat{2}$ – $\hat{1}$ – $\hat{7}$) between V/V and V_6 .

Example 17.5

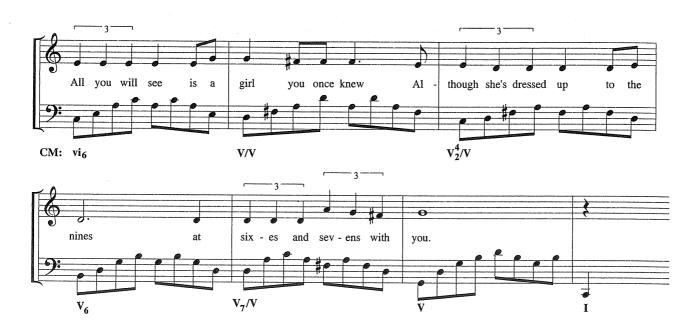
W. A. Mozart, Symphony no. 40 in Gm, K. 550, IV, mm. 1-8



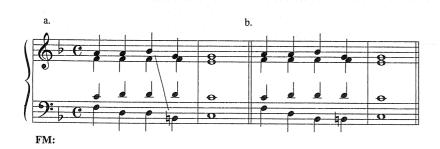


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Tim Rice-Andrew Lloyd Webber, "Don't Cry for Me Argentina," from Evita (Verse)



Example 17.7





V₇ OF IV (iv)

Along with V_7/V , the dominant of IV (iv in minor) is very frequently found in music. V_7/IV is the Mm_7 chord built on $\hat{1}$ (the pitch a 5th above $\hat{4}$). In major keys, V_7/IV consists of the I triad with an added m7. The new accidental introduced by this chord is thus $\sqrt[1]{7}$. In minor keys, $\sqrt[1]{7}$ is a diatonic pitch, and we need instead to raise the minor $\hat{3}$ to $\frac{1}{3}$, the LT of $\hat{4}$. Examples 17.8a and b show the spelling and resolution of this chord in both M and m. Observe that in example 17.8b, $\sqrt[1]{3}$ and $\sqrt[1]{3}$ have been kept in the same voice, and the voice leading from example 17.8a has been changed in example 17.8b to avoid the +2 between $\sqrt[1]{6}$ and $\sqrt[1]{7}$ in the soprano.

The most frequent melodic pattern harmonized with a secondary dominant of IV and its resolution to IV is $\sqrt[3]{-6}$ (as part of the motion $\hat{1}-\sqrt[3]{-6}$), as shown in example 17.8a. Other possible patterns are $\hat{3}-\hat{4}$, $\hat{5}-\hat{4}$, or $\hat{5}-\hat{6}$.

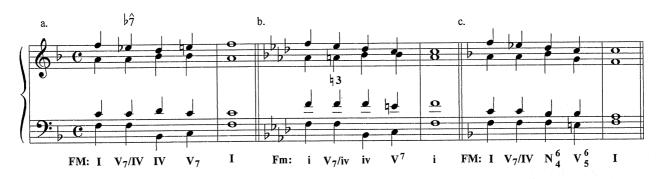
EXERCISES

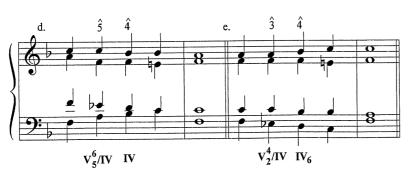
To practice spelling secondary dominants of IV in root position and inversions, refer to exercise 2 in worksheet 17 at the end of this chapter.



To practice spelling and resolving secondary dominants of IV, refer to exercise 3 in worksheet 17 at the end of this chapter.

Example 17.8





Examples 17.8a and b illustrate the use of the dominant of IV in the context of cadential progressions. V_7/IV in root position is also often used in opening progressions, with the function of both prolonging the opening I and of creating a pull toward the subdominant. In example 17.9 you will see how Beethoven begins his Trio, op. 1, no. 1, with a very effective use of such a progression. Analyze the complete passage.

Example 17.9

L. v. Beethoven, Trio op. 1, no. 1, I, mm. 1-9

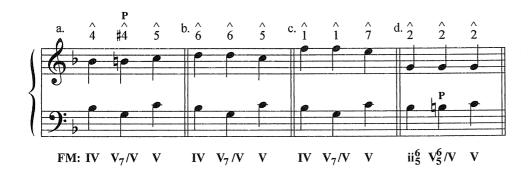


C. Schumann, Trio in Gm, op. 17, I, mm. 1-9

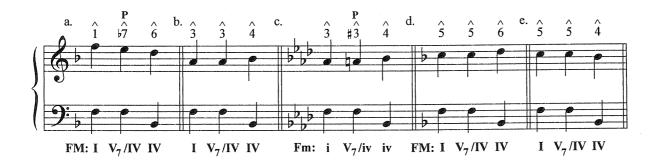


The prolongation of the tonic may be stressed even more by resolving V_7/IV to IV_4^6 (N_4^6) on a tonic pedal, as in example 17.8c. This is also a frequent opening progression because it establishes the tonic in a strong and colorful way. Study C. Schumann's use of this progression in the opening measures of her Gm Trio (example 17.10, mm. 1–3).

The most frequent **inversions of V₂/IV** are V_5^6 /IV and V_2^4 /IV, normally used in the standard progressions shown in examples 17.8d and e. V_2^4 /IV usually follows I to create a very effective linear progression in which the upper voices do not move, as shown in example 17.8e. The bass moves down by step from $\hat{1}$ to $\hat{1}$, and then to $\hat{6}$, and the other voices complete the IV₆ to which V_2^4 /IV must resolve. Example 17.10, mm. 6–7 shows a version of this progression.



🖒 Example 17.12



CHARACTERISTIC SOPRANO-BASS PATTERNS

Examples 17.11 and 17.12 present some of the characteristic soprano-bass patterns that can be harmonized with progressions using secondary dominants of V and IV. The most effective among these patterns are the ones that include chromatic passing motion (examples 17.11a and d, and 17.12a and c, the latter possible only in minor keys). Play each of these outer-voice patterns at the piano, adding inner voices in keyboard texture.

ELABORATING THE I-V-I PROGRESSION

The dominant of V functions most commonly as either a pre-dominant or as an extension of the tonic. Both functions are illustrated in example 17.13, in the context of the basic I–V–I progression. In examples 17.13a and b, the dominant of V provides an



extension of a previous pre-dominant chord by means of a chromatic passing motion (in the soprano in example 17.13a and in the bass in example 17.13b). Examples 17.13c and d, on the other hand, show progressions in which the dominant of V functions as an extension of the initial tonic.

The dominant of IV normally functions as a prolongation of the tonic. In the three progressions shown in example 17.14, the dominant of IV extends the initial tonic in the I–V–I progression by means of a passing tone $(\sqrt[5]{7})$.

Elaborating a Diatonic Framework with Chromatic Harmony

At the beginning of this chapter we mentioned that chromatic chords often result from linear *elaborations of a diatonic framework*. Example 17.15 illustrates exactly that. We begin, in 17.15a, with the basic frame I–IV–V–I. In example 17.15b we extend the pre-dominant IV with an additional ii_5^6 . In example 17.15c we see that a PT, Eb, between I and IV generates a V_7/IV . Moreover, another chromatic PT in the bass, B\$ (a simple chromatic alteration of the ii_5^6 chord) creates a V_5^6/V . As a final elaboration (in

) Example 17.14





this case diatonic), we embellish V with a cadential ⁶/₄ figure. Example 17.15c shows that the original I–IV–V–I diatonic framework remains, now elaborated with chromatic harmony and a cadential ⁶/₄.



EXERCISES

To practice realizing progressions including tonicizations of V and IV, refer to exercises 4 and 5 in worksheet 17 at the end of this chapter.

To practice harmonizing a melody including tonicizations of V and IV, refer to exercise 6 in worksheet 17 at the end of this chapter.

To practice writing your own progressions using tonicizations of V and IV, refer to exercise 7 in worksheet 17 at the end of this chapter.

To practice analysis of musical fragments including tonicizations, refer to exercise 1 in worksheet 17 at the end of this chapter.

FOR FURTHER STUDY

For additional analysis using materials studied in this chapter, refer to the *Harmony in Context* Web page at www.mhhe.com /roigfrancoli2e.

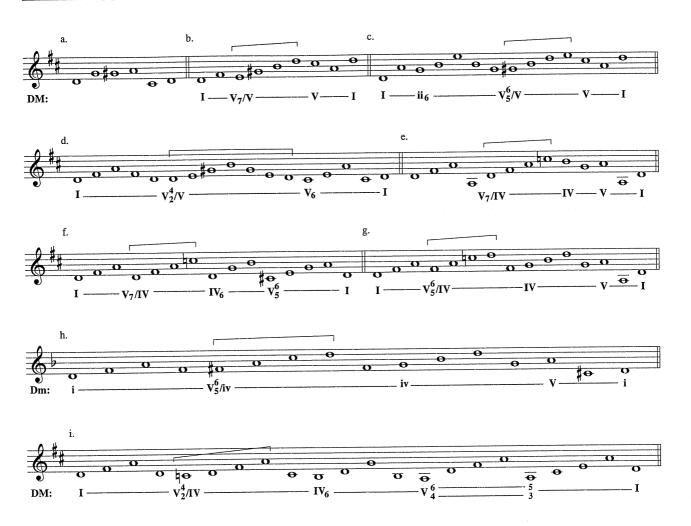
ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 17 in the workbook.

PITCH PATTERNS

Sing the melodic pitch patterns in example 17.16. As you sing, listen to the secondary dominants and their resolutions.

↓♪ Example 17.16



Terms for Review

Chromatic tones
Chromatic harmony
Modulation
Chromatic (altered) chords
Tonicization
Secondary dominants

Applied dominants
Secondary leading tone
V₇/V and inversions
Cross relations
Chromaticized voice exchange
V₇/IV and inversions

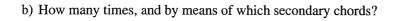


Worksheet 17

EXERCISE 1 Analysis.

AERCISE I Analysis.
1. Refer to anthology, no. 19, Haydn, Menuet and Trio in CM. Identify two cases of tonicization in mm. 9–12. What are the degrees tonicized? How does each of the tonicizations work? What are the chromatic degrees introduced and the Roman numerals in each of the tonicizations?

2.	Play through the period in example 17.17.
	a) What degree is tonicized in the first phrase?



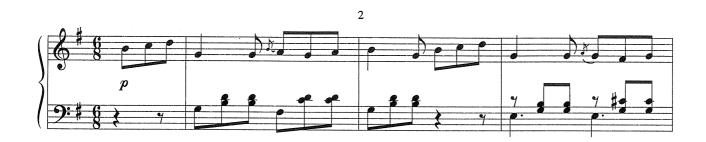
- c) One of these tonicizations is linear and embellishing, whereas the other one is functional. Explain.
- d) Where do these tonicizations lead to within the period?
- e) Does the second phrase also include a similar tonicization?

W. A. Mozart, "Là ci darem la mano," from Don Giovanni, m, 1-8



- 3. a) Two tonicizations take place in example 17.18. Identify both, provide exact RNs for each, and mark on the score any linear voice leading resulting from the tonicizations.
 - b) This period features four clear harmonic units of two measures each. Comment on the formal/harmonic function of each of these units within the period. For instance, the first unit establishes the key (by what means?).
 - c) On your own music paper, provide a metric reduction for the passage (both hands). Provide Roman numerals under the reduction, and show the form of the fragment by means of a bubble diagram over the reduction.

L. v. Beethoven, Sonatina in GM, II, mm. 1-8





4. The opening of the chorale in example 17.19 features a tonicization. Explain what degree is tonicized, provide a RN analysis for the complete passage, comment on the voice leading for the tonicization, and explain the linear character of the complete example.

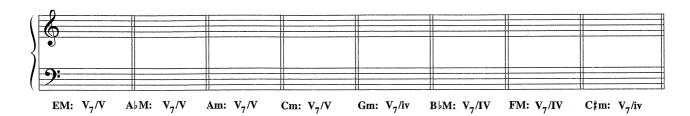
Example 17.19

J. S. Bach, Chorale 8, "Freuet euch, ihr Christen," mm. 1–2



EXERCISE 2

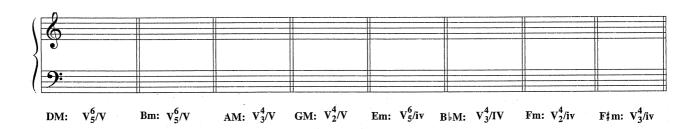
1. Write the following secondary dominants in root position, in four voices, with correct spacing. Provide key signatures.



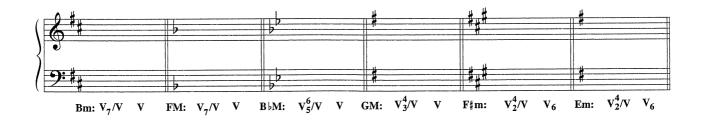
2. Write the following secondary dominants in inversion, in four voices, with correct spacing. Provide key signatures.

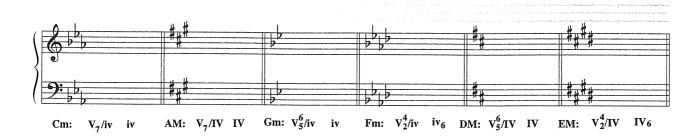
Procedure for spelling secondary dominants:

- a) The root of a secondary dominant is the pitch a 5th above (or a 4th below) the tonicized degree. The root of V_7/V , for instance, is $\hat{2}$, the pitch a 5th above $\hat{5}$.
- b) On the root, you need to build a Mm₇ chord. Check carefully for possible accidentals you may need: the third should be major, the fifth perfect, and the seventh minor.

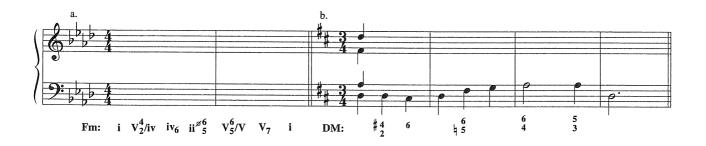


EXERCISE 3 Spell and resolve the following secondary dominants of V and IV.

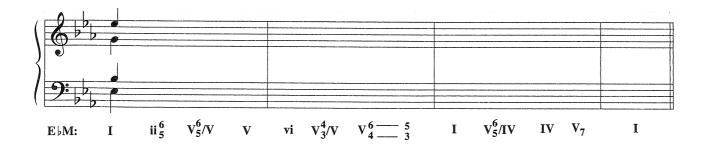




EXERCISE 4 Realize the following short progressions in four voices. Provide RNs for exercise 16.4b. Be careful to check the outer-voice frame for good counterpoint.



EXERCISE 5 Realize the following progression in four voices. Be careful to check the outer-voice frame for good counterpoint.



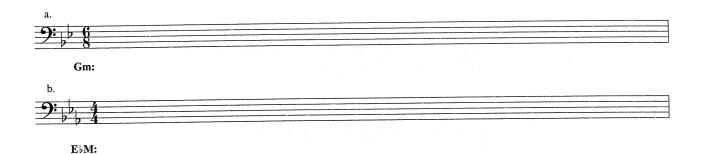
EXERCISE 6

- 1. Harmonize the following melody with a bass and RNs or a figured bass. Include a tonicization of iv and one of V. The harmonic rhythm is one chord per beat.
- 2. When you are sure that your harmonization is correct, copy the melody again on your own music paper and, below it, provide a left-hand keyboard realization of your harmonization.



EXERCISE 7

- 1. Write your own progressions (bass and RNs) in the keys and meters indicated below. Use the required chords, besides any of the other chords we have already studied. Make sure you resolve secondary dominants (and any other chords that require resolution) correctly.
 - a) Gm; include V₅/iv and V₇/V.
 - b) ElM; include V_2^4/IV , V_5^6/V , and V_2^4/V .



2. Choose one of your own progressions from above and use it as a harmonic basis to compose a phrase for keyboard. Your phrase should consist of a simple melody (right hand) with keyboard-style accompaniment (left hand).

Chapter 18

Secondary Dominants II

In this chapter we will continue the study of secondary dominants. We will first examine the dominants of ii, vi (VI in minor), iii (III in minor), and the less frequent V_7/VII . We will also study the deceptive resolution of secondary dominants, the connection of consecutive secondary dominants and the irregular resolution resulting from this connection, and we will introduce secondary key areas.

The dominants of the supertonic, submediant, and mediant can frequently be found in music, and in principle they may appear in any inversion. To simplify our presentation, however, we will focus only on those inversions which appear most often in the form of standard harmonic patterns.

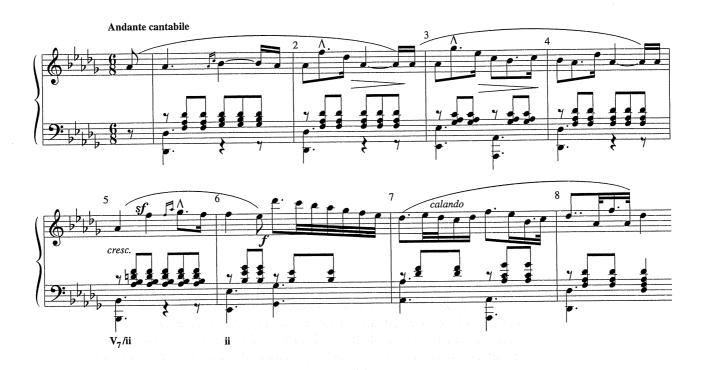
V₇ OF ii

Because the supertonic in minor keys is a diminished triad and only M and m triads can be tonicized, V of ii is found only in the major mode. It is a Mm₇ chord built on $\hat{6}$ (the pitch a 5th above $\hat{2}$), and it includes the accidental $\sharp \hat{1}$, the secondary leading tone (LT) of $\hat{2}$. In example 18.1, by nineteenth-century American composer Clara Scott, V₇/ii is used to approach the cadential gesture $ii_7-V_{4-3}^{6-5}-I$. The progression V₇/ii–ii–V–i (see also example 18.3) is especially strong because of the succession of 5th-related roots $(\hat{6}-\hat{2}-\hat{5}-\hat{1})$. Examine also Scott's voice leading: $\sharp \hat{1}$ (D \sharp) functions as a chromatic passing tone (PT) between $\hat{1}$ and $\hat{2}$.

The most frequent inversion of V_7/ii is V_5^6/ii , in which $\sharp \hat{1}$, the secondary LT, is emphasized in the bass (see example 18.3). The opening of Chevalier de Saint-Georges's Sonata no. 2 for violin and piano (example 18.2) shows an effective use of this inversion. Notice that while the chord in both m. 3 and m. 7 is V_3^6/ii , the root of the chord, F_7^4 , appears only in the melody, thus further stressing $\sharp \hat{1}$ in the bass.

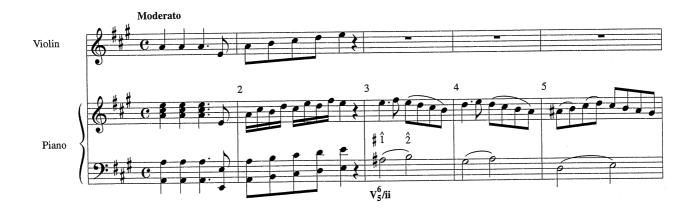
🕠 🕽 Example 18.1

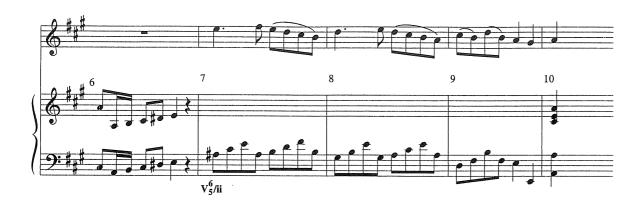
Clara Scott, Twilight Fancies, mm. 1-8



Example 18.2

Chevalier de Saint-Georges, Sonata no. 2 for Violin and Piano, mm. 1-10







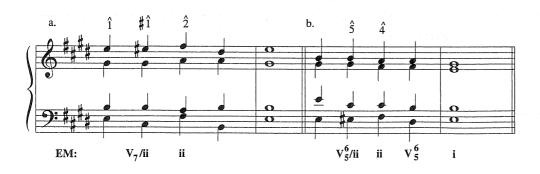
EXERCISE

To practice spelling and resolving secondary dominants of ii, refer to exercise 2 in worksheet 18 at the end of this chapter.

V₇ OF vi (VI)

The dominant of the submediant is found equally in major or minor modes. In major, V_7/vi is built on $\hat{3}$ (the pitch a 5th above $\hat{6}$) and includes $\sharp \hat{5}$, the LT of $\hat{6}$. In minor, V_7/VI includes the M triad III (diatonic), with an added m7, $\flat \hat{2}$. The opening phrase from the Étude-Mazurka "La Favorite," by nineteenth-century American composer Jane Sloman, illustrates the use of V_7/vi within a period in FM (example 18.4). After the first phrase establishes the key with a very standard diatonic progression, the V_7/vi at the beginning of the second phrase introduces an element of harmonic variety. Notice the tonally strong bass in this second phrase (two consecutive sets of P4-related pitches), the chromatic voice leading in the left hand, and the numerous chromatic nonchord tones (NCTs) in the right hand.

Example 18.3





Jane Sloman, "La Favorite," Étude-Mazurka, mm. 1-8

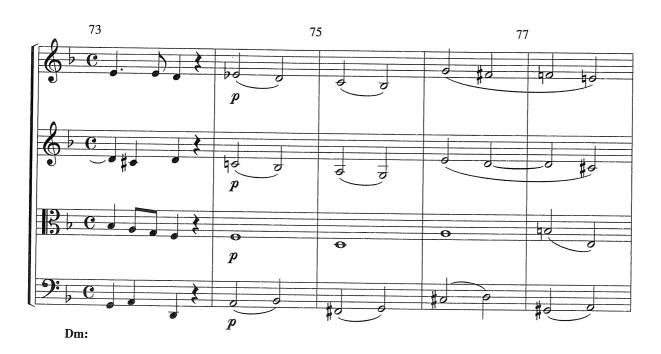


As with all secondary dominants, this chord is often found in first inversion (V_5^6 /vi) because of the linear strength of the LT in the bass. Examine example 18.5, identify V_5^6 /VI (the passage is in Dm), and verify its voice leading. What other secondary chords can you identify in the fragment?

The second inversion of V_7/vi , V_3^4/vi , allows for a good linear bass line descending by steps from $\hat{1}$. Another example by Mozart (example 18.6) demonstrates this progression on the bass $\hat{1}-\hat{7}-\hat{6}$, $I-V_3^4/vi-vi$. Analyze the first five chords in this passage (mm. 20–21; notice that the key here is E_PM , despite the key signature), paying attention not only to function and RNs, but also to voice leading. What is the linear function of the second chord? And of the fourth chord? The remainder of the passage presents some interesting challenges that we will discuss later in this chapter (see p. 432).

Consult example 18.7 for a summary of progressions involving the dominant of vi. Make sure you notice the difference between the V_3^4/vi progression (example 18.7d) and the progression with V_2^4/IV (example 17.8e). The last progression in this example (example 18.7e) shows a very effective use of V_5^6/vi as a chromatic passing chord embellishing a deceptive cadence. Play this progression, first omitting the V_5^6/vi (you will thus hear a simple deceptive cadence, $I-V_7-vi$), and then with the passing V_5^6/vi inserted between V_7 and vi.

W. A. Mozart, String Quartet in Dm, K. 173, IV, mm. 73-77

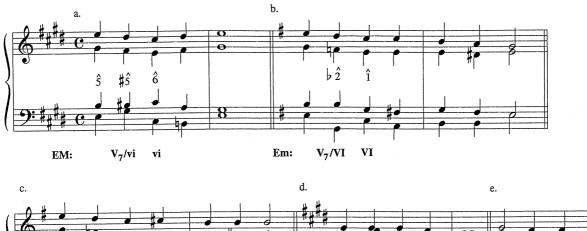


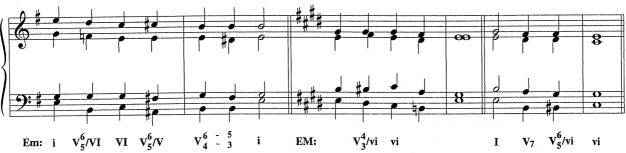
Example 18.6

W. A. Mozart, Sonata for Violin and Piano, K. 481, II, mm. 20-24



🔝 Example 18.7





EXERCISE

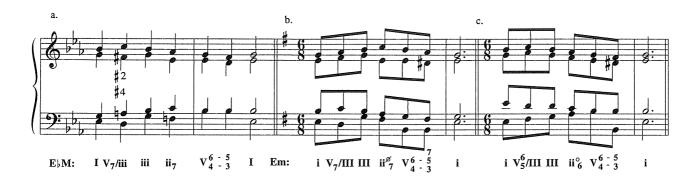
To practice spelling and resolving secondary dominants of vi, refer to exercise 2 in worksheet 18 at the end of this chapter.



V₇ OF iii (III)

The secondary dominant of the mediant in the major mode is a Mm_7 chord on $\hat{7}$ (the pitch a 5th above $\hat{3}$), with two accidentals: $\hat{\sharp}$ (LT of $\hat{3}$) and $\hat{\sharp}$ A. In the minor mode, on the other hand, V_7/III is built on $\hat{\flat}$, and it does not involve any chromatic alteration (the scale degrees are $\hat{\flat}$ 7–2–4 $\hat{\flat}$ 6, all members of the natural minor scale). Consult example 18.8 for spelling and resolution of this chord.

Because in minor modes the mediant key is the relative major (III), a key very closely related to the minor tonic key, the secondary dominant of the mediant appears more often in minor than in major. This chord also appears frequently in first inversion, although you will find examples of it in both root position and other inversions. The connection $I-V_7/iii$ requires special voice-leading care because of the danger of parallel 5ths and a melodic +2 between $\hat{1}$ and $\hat{2}$ (try it and you will see; a solution is to



double the third in I, as in example 18.8a). In example 18.9a, Schubert partially avoids the problem by writing leaps in two voices (right hand). Does he avoid, however, the +2? Example 18.9b, on the other hand, illustrates a standard use of V_7 /III in minor. By writing the chord in first inversion (V_5 /III), Chopin can take advantage of the linear bass progression, $\hat{1}-\hat{2}-\hat{3}$. Notice also how natural and diatonic this chord sounds in the minor mode as compared to the equivalent progression in major.



EXERCISE

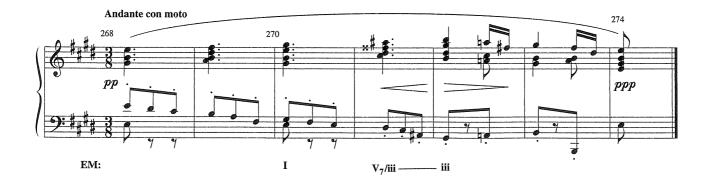
To practice spelling and resolving secondary dominants of iii, refer to exercise 2 in worksheet 18 at the end of this chapter.

V₇ OF VII

We do not tonicize vii because it is a diminished triad. As we studied in chapter 14, however, $\sqrt[1]{7}$ in minor is a diatonic degree, the root of a M triad, VII. This degree is

Example 18.9a

F. Schubert, Symphony in Bm, "Unfinished," II, mm. 268-274



Example 18.9b

F. Chopin, Mazurka 43 in Gm, op. posth. 67, no. 2, mm. 1-6



sometimes tonicized. The secondary dominant of VII is built on $\hat{4}$ and includes the raised $\hat{6}$. Although V₇/VII may be used as an independent tonicization, it is often found as part of a circle of 5ths of secondary dominants. Refer to anthology, no. 5 (Vivaldi, Concerto, op. 3, no. 3), mm. 15–22. This passage, in Em, begins with a sequence based on a circle-of-5ths bass: B–E–A–D. What harmonies does Vivaldi assign to the bass B–E–A in mm. 16–18? In mm. 19–20, we have an example of V₇/VII–VII to the bass A–D, $\hat{4}$ \rightarrow $\hat{7}$. A four-voice realization of the same progression appears in example 18.10.

EXERCISES

To practice spelling and resolving secondary dominants of VII, refer to exercise 2 in worksheet 18 at the end of this chapter.

To practice realizing progressions including tonicizations of ii, vi, and iii, refer to exercise 3 in worksheet 18 at the end of this chapter.

To practice harmonizing a melody including various tonicizations, refer to exercise 4 in worksheet 18 at the end of this chapter.



Example 18.10



CHARACTERISTIC SOPRANO-BASS PATTERNS

The most characteristic soprano-bass patterns that are harmonized with secondary dominants of ii and vi involve chromatic passing motion in one of the voices. Examples 18.11a and b show two such patterns harmonized with the dominant of ii, and examples 18.11c to g show patterns using the dominant of vi (or VI in minor). Examples 18.12a to d, on the other hand, feature patterns harmonized with the dominant of iii (III in minor), including a passing figure in the soprano (examples 18.12 a and c) and a neighbor figure (examples 18.12b and d). Finally, example 18.12e features a chromatic passing figure harmonized with the dominant of VII. Play each of these outer-voice patterns, adding inner voices in keyboard texture.

ELABORATING THE I-V-I PROGRESSION

Each of the progressions shown in example 18.13 features an underlying I–V–I progression in which the opening tonic has been extended by means of a secondary dominant of ii (examples 18.13a and b), vi (examples 18.13c and d), iii (examples 18.13e and f), or VII (example 18.13g). Passing motion is used to extend the tonic in examples 18.13a

Example 18.11



Example 18.12





to d and in example 18.13g, whereas neighbor motion is present in both examples with the dominant of iii or III (examples 18.13e and f).

DECEPTIVE RESOLUTIONS OF SECONDARY DOMINANTS

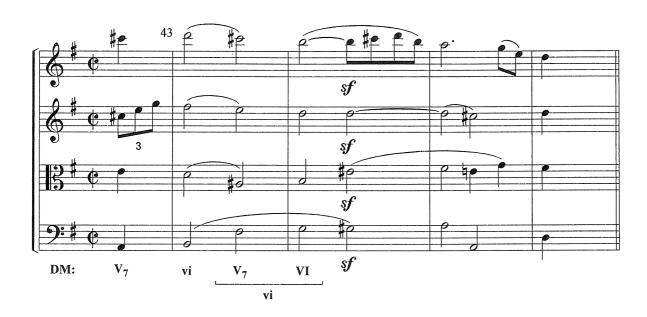
Just as a dominant chord may resolve deceptively to vi or VI, a secondary dominant may resolve deceptively by upward stepwise root motion to the triad that would function as vi or VI in the tonicized area. The Haydn fragment reproduced in example 18.14, for instance, illustrates a deceptive resolution of V_7/vi . The passage is in DM, and we first hear a deceptive resolution of V_7 to vi, followed by a tonicization of the submediant (V_7/vi) . This chord also resolves deceptively to a GM chord, which, in the tonicized key area of the submediant, Bm or vi, is itself VI. The bracket under the Roman numerals V_7 –VI should be read as "of vi," hence " V_7 –VI of vi."

SEQUENCES WITH SECONDARY DOMINANTS

Various sequential patterns are possible using secondary dominants. We will now study patterns by descending 5ths, ascending 2nds, and descending 3rds.

⇒ ∑ Example 18.14

J. Haydn, String Quartet op. 77, no. 1, I, mm. 43-46



The Descending Circle-of-5ths Sequence

The following comments refer to example 18.15. Play through all the progressions if possible, listen to them, and sing them in class.

- 1. In example 18.15a you will recognize a succession of secondary dominants with their respective resolutions. The resulting bass pattern is a circle of 5ths.
- 2. In example 18.15b, we have deleted the intervening triad of resolution between secondary dominants. Each secondary V_7 now resolves to another secondary V_7

Example 18.15a



Example 18.15b

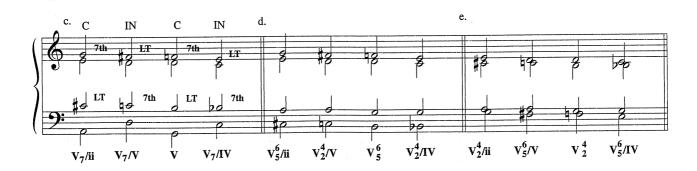


whose root is a 4th above (or 5th below). In chapter 16 we studied the circle of 5ths of diatonic seventh chords. Now we can write a chromatic circle of 5ths of secondary dominants.

- 3. The connection of two **consecutive secondary V**₇s requires an **irregular resolution** of the LT and the seventh. In the first place, notice that the chords in succession alternate between complete (C) and incomplete (IN). Then observe the voice leading (and see example 18.15c).
 - a) The seventh of the first chord moves down chromatically to become the LT of the next chord.
 - b) The LT of the first chord moves down chromatically to become the seventh of the next chord.

Observe, too, that in this progression (see example 18.15b) two of the voices move chromatically as long as you have successive V_7 s.

🔊 Examples 18.15c, d, and e



🖒 Example 18.15f



The Circle of 5ths with Inverted Secondary Dominants

If you place either of the chromatic voices in the bass, you will end up with a sequence of alternate secondary V_5^6 s and V_2^4 s, all of them complete. Compare example 18.15c (root position) with examples 18.15d and e. In the latter two, each of the chromatic voices has been placed in the bass, with the same results (in different order) in the inversions: $\frac{6}{5} - \frac{4}{2}$ or $\frac{4}{2} - \frac{6}{5}$. This is a common **sequential pattern**, as well as one of the most effective chromatic progressions.

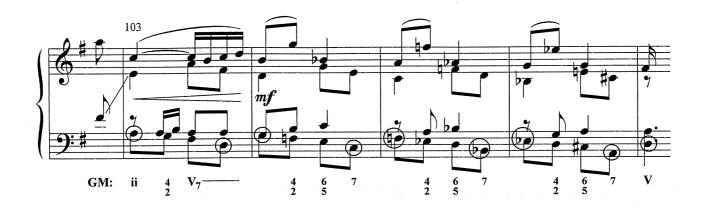
In example 18.15f you can see this pattern applied to a closed progression in CM. Notice that we can now harmonize a **descending chromatic bass**. Moreover, we still think of this progression as being in CM—a very chromatic CM, to be sure, but CM nonetheless. So, what happened then to our good old white-key CM scale? After you introduce wholesale chromaticism, you will see that the chromatic scale ends up substituting for the diatonic scale (for any diatonic scale, in any key). These examples also show the harmonic power of secondary dominants. In only two chapters and with a single harmonic concept, we have gone from all-diatonic harmony to the type of thoroughly chromatic progression we are discussing now.

Example 18.16 illustrates several of the sequential techniques we have just discussed. The basic underlying progression is a circle of 5ths, indicated by the roots circled in each of the measures. The passage in mm. 104–106 is all made up of secondary dominants. The second and third eighth notes in each measure, connecting the circled roots, create a repeated $\frac{4}{2}$ – $\frac{6}{5}$ pattern like the one we just discussed in example 18.15f.

Some Further Examples from the Literature

Refer to example 18.6, Mozart's violin sonata K. 481, and analyze mm. 2–3. The V_2^6/vi in m. 2, beat 1, resolves to a major VI, or V/ii, which immediately becomes V_2^4/ii . What does the V_2^4/ii move on to? What happens to the bass B_1^b , the seventh of V_2^4/ii , as it moves to the next chord? And to the E_1^4 , the LT in V_2^4/ii ? Complete the analysis of m. 3, tracing the voice leading of the LTs and sevenths.

A. Vivaldi, "Laudamus Te," from Gloria, mm. 103-107



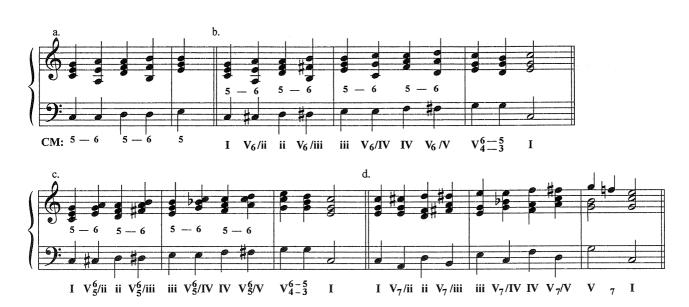
Refer now to anthology, no. 44 (Chopin, Mazurka 43). First, analyze mm. 25–32, in BlM. You will find consecutive V₇s in mm. 25–26 (repeated in mm. 27–28), and especially in mm. 29–30, a circle-of-5ths fragment. In mm. 29–30, look at the right hand and trace the voice leading of the LTs and sevenths for each chord. Do they follow the criteria we have established above? What about the left hand in these measures: Does it follow our voice-leading principles? Well, composers *do* take liberties. In a case like this, with the left-hand parallel 5ths, Chopin is reinforcing the already strong bass by 5ths, in contrast to the smooth, chromatic right hand. Of course, Chopin did this in a deliberate way to emphasize musically an instrumental bass, and in no way are these 5ths "voice-leading errors."

The passage in mm. 29–30 tonicizes only diatonic degrees in B\\.M. What about the similar but longer linear sequential passage in mm. 21–25? Some nondiatonic degrees are tonicized here, beginning with the V_7/\sqrt{V} in m. 23. The circle of 5ths leads from V_7/V to V_7/\sqrt{V} VII, and after that on to the tonicization of $\sqrt{3}$, $\sqrt{6}$, $\sqrt{2}$, and so forth. One could continue like this for the complete twelve-pitch cycle of the chromatic scale. To avoid this, Chopin breaks the circle of P5ths in m. 25 with a °5th from G\\, to C (instead of C\,), thus getting the sequence back into B\\.M through V_7/V.

Sequences by Ascending 2nds: The 5-6 Technique

In chapter 16 we studied the diatonic sequence by ascending 2nds, and we saw that one way of avoiding the parallel 5ths resulting from triads ascending by steps was to alternate \(^5_3\) and \(^6_3\) chords using the "5-6 technique" illustrated in example 18.17a. We can turn this sequence into a chromatic sequence using secondary dominants by raising chromatically the repeated bass note in the bass, as shown in examples 18.17b and c. In example 18.17b, the secondary chords are triads in \(^6_3\) position, whereas in 18.17c they are seventh chords in \(^6_5\) position.

Notice that this sequence allows us to harmonize an **ascending chromatic bass line.** In a variant of this sequence, shown in example 18.17d, the secondary dominants



are in root position, creating a "down a 3rd-up a 4th" bass pattern. This sequence allows for the ascending chromatic line to be in the soprano. Example 18.18 shows an example by Handel of this chromatic sequence ascending by steps.

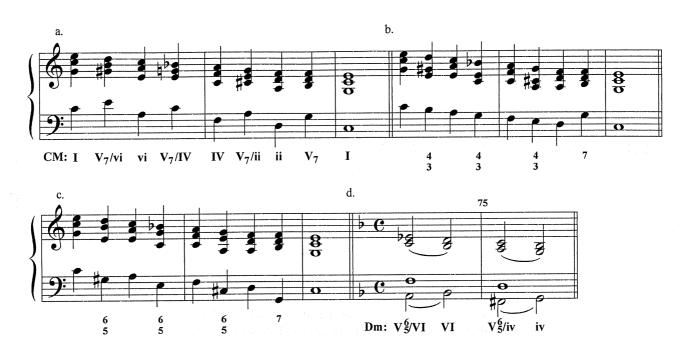
Sequences by Descending 3rds

As we saw in chapter 16 (refer to examples 16.20e and f), by inserting a chord in either first inversion or root position, we avoid the parallel 5ths and 8ves that would result in a sequence descending by 3rds. Similarly, we can insert the secondary dominant of each 3rd-related chord, as shown in example 18.19a. Thus, the sequence I–vi–IV–ii becomes

Example 18.18

G. F. Handel, Minuet in F, mm. 9-14





I– V_7/vi –vi– V_7/IV –IV– V_7/ii –ii. The same secondary dominants in second inversion (4_3) result in a descending bass line, as shown in example 18.19b. Example 18.19c shows the same sequence, but now with the secondary dominants in 6_5 position. The resulting bass pattern ("down a 4th-up a 2nd") is particularly interesting because of the dissonant °4th intervals. If you refer back to example 18.5, mm. 74–75, you will hear a brief instance of exactly this sequence (from Mozart's String Quartet K. 173, IV), as shown in a reduced form in example 18.19d.

EXERCISES

To practice realizing chromatic sequences including secondary dominants, refer to exercise 5 in worksheet 18 at the end of this chapter.

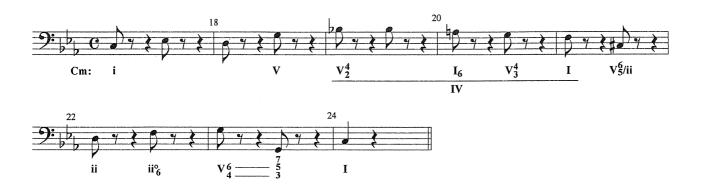
To practice analysis of musical fragments including various tonicizations, refer to exercise 1 in worksheet 18 at the end of this chapter.



Listen to anthology, no. 54 (Verdi, *Il trovatore*, act II, no. 14, mm. 15–24). The fragment is in C: It begins in Cm and ends in CM. In mm. 19–21 we hear tonicizations of F (4), and in mm. 21–22 we hear a tonicization of D (2). The tonicization of 4 involves more than a single secondary dominant and its resolution to the tonicized F. In mm. 19–21



G. Verdi, *Il trovatore*, act II, no. 14, mm. 17–24 (Anthology, no. 54), bass line



we hear V_2^4 /IV followed by its resolution to IV₆, and then V_3^4 /IV resolving to IV. We will use the concept of **secondary key area** to refer to short passages in which there is a progression that involves more secondary chords than just the dominant, or in which a degree is tonicized more than once. Mm. 19–21 of our example are, then, a secondary key area of IV. Example 18.20 presents the bass line for this passage (where the repetition of mm. 15–16 has been omitted) and shows our notation for secondary key areas. The length of the secondary key area is indicated by a line. The Roman numeral under the line refers to the degree tonicized (IV in our case), and the RNs above the line indicate the chords within the key area, analyzed and labeled in the secondary key, in this case FM (IV in CM).

Refer now to anthology, no. 34 (Beethoven, Sonata op. 13, III), mm. 18–25. The first period of the piece ends in m. 17 with a perfect authentic cadence (PAC) in Cm. Two brief secondary key areas (four measures each) follow, the first one in the Fm area (iv in Cm), the second one in the EbM area (III in Cm). As it turns out, the second key area, of III, is here to stay: It proves to be a full modulation to EbM, on which the second section of the piece is built, beginning in m. 25. But in mm. 22–24 we don't know this yet. We find out only after EbM is established in m. 25, and we hear the new phrase continuing in EbM. So, by analogy with mm. 18–21 (key area of iv), we will consider mm. 22–25 a secondary key area of III. Listen to the piece and notice the transitional character of these two passages in iv and III. Example 18.21 provides the bass line and the secondary-key-area indications. Fill in the specific RNs for each chord within the two key areas (above the key-area line).

ASSIGNMENT AND KEYBOARD EXERCISES

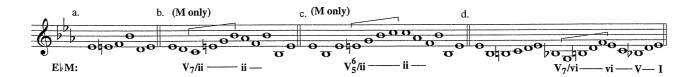
For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 18 in the workbook.



PITCH PATTERNS

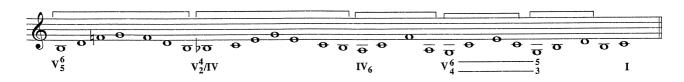
Sing the melodic pitch patterns in example 18.22, paying attention to the sound of the various secondary dominants marked by brackets.

🗐 🕽 Example 18.22









Terms for Review

V₇/ii and inversions
V₇/vi and inversions
V₇/iii and inversions
V₇/VII and inversions
Deceptive resolution of secondary
dominants
Sequences with secondary dominants
The descending circle-of-5ths
sequence

Consecutive secondary V_7s Irregular resolution of V_7s $^6_{5-2}$ sequential pattern
Sequences by ascending 2nds: The 5-6 technique
Sequences by descending 3rds
Harmonizing the descending and ascending chromatic bass lines
Secondary key areas

Worksheet 18



EXERCISE 1 Analysis. The following examples include tonicizations of various degrees. Identify the degree or degrees tonicized in each case, and provide exact RNs if required.

- 1. Anthology, no. 31, Paradis, *Sicilienne*, mm. 7–8. Provide RNs for these two measures (the piece is in GM).
- 2. Example 18.23. Tonicization plays an essential role in this brief piece. What two degrees are tonicized in mm. 1–8? And what two degrees are tonicized in mm. 9–16? Provide RNs for all four secondary dominants. Comment on the melodic and harmonic sequential patterns that result in each of these two cases.

Example 18.23

F. Schubert, Originaltänze, op. 9, no. 16



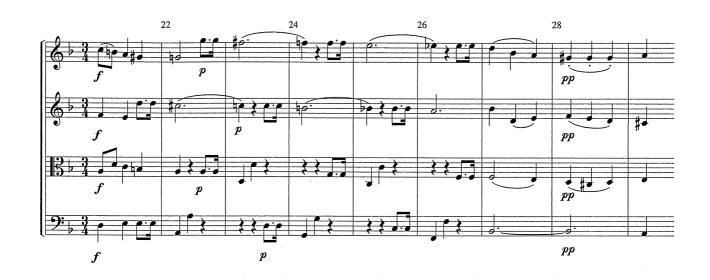
3. Example 18.24. Which two degrees are tonicized in this example? Can you identify one or more linear patterns in the voice leading for one of these tonicizations?

L. v. Beethoven, Piano Concerto no. 4, op. 58, II, mm. 1-13



- 4. Example 18.25. What progression is this passage based on? What kind of chords is the progression built on? Does it illustrate some special voice-leading properties we have studied in this chapter?
- 5. Example 18.26. Analyze this passage with RNs and identify the exact type of harmonic sequence on which it is based.
- 6. Example 18.27. The song from which this passage is taken is in CM. Provide a harmonic analysis for the passage. Analyze mm. 5–7 as a secondary key area, providing the correct analytical notation under the score.

W. A. Mozart, String Quartet in Dm, K. 421, III, mm. 21-29



Example 18.26

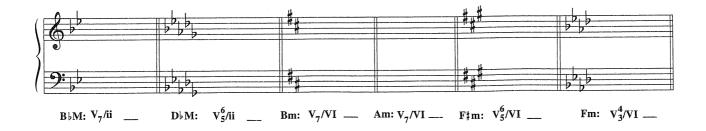
G. Puccini, "Gloria," from Messa di Gloria, mm. 12-15

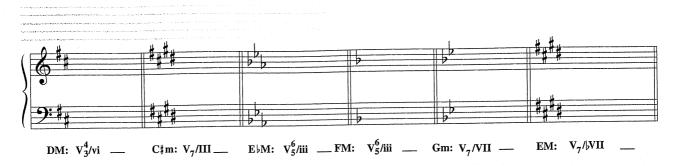


Cole Porter, "Begin the Beguine," from *Jubilee* (end of refrain and beginning of bridge)

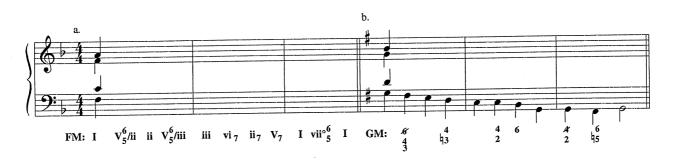


EXERCISE 2 Write and resolve the following secondary dominant chords. The resolution should be to the appropriate tonicized chord, in root position or inversion as required by the voice leading in the bass.





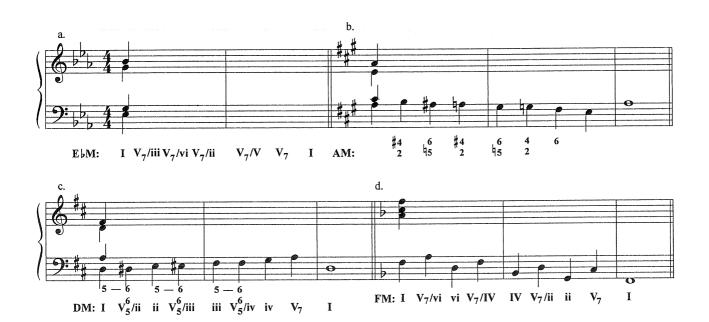
EXERCISE 3 Realize the following progressions in four voices and provide RNs for progression b.



EXERCISE 4 Harmonize the following melody (based on Bach's Chorale 105) in four voices, in chorale style, and include a RN analysis of your harmonization. The notes marked with an asterisk should be harmonized with secondary dominants. Include tonicizations of III, iv, and V (although not necessarily in this order). Double-check your outer-voice frame for good counterpoint.



EXERCISE 5 Realize the following sequential patterns involving secondary dominants. Be careful with the voice leading and the irregular resolution of the LT and the seventh. Provide RNs for progression b.



Chapter 19

Secondary Leading-Tone Chords

In example 19.1 you will recognize a familiar harmonic structure: two phrases in Gm, the first one ending on a half cadence (HC), the second one on a perfect authentic cadence (PAC). In the approach to V at the HC, you will also recognize a familiar bass line, the secondary leading-tone figure $\hat{4}-\hat{\sharp}4-\hat{5}$. On the basis of our studies so far, we might expect $\hat{\sharp}4$ to be harmonized with V_3^6/V . A closer look will show that Bach chose to harmonize it with another familiar chord, a vii°₇ chord, that close cousin and frequent substitute of V_5^6 . In this case, vii°₇ is not "of i" (Gm), but rather, because it is built on $C\sharp$, "of V" or "of D" in this example. (Incidentally, what unusual voice-leading event

Example 19.1

J. S. Bach, Chorale 19, "Ich hab' mein' Sach' Gott heimgestellt," mm. 1–4



do you see in m.1, in the right hand? To help explain it, remember that Bach was harmonizing a given, existing melody, which he was not going to change just because of a leading tone [LT] resolving in an unusual manner. Does the "voice overlap" help with the harmonic voice leading?)

SECONDARY LEADING-TONE SEVENTH CHORDS

The chord on $\sharp \hat{4}$ in example 19.1 is vii°₇/V, a secondary vii°₇ chord. Just as secondary dominants can tonicize any degree, the other members of the dominant family can also be used to tonicize chords. A **secondary leading-tone chord** is a triad or seventh chord built on a secondary LT (the pitch a half step below the degree we are tonicizing). vii°₇/V, for instance, is a fully diminished seventh chord built on $\sharp \hat{4}$ (the pitch a half step below $\hat{5}$), and it will resolve to V as if V were a momentary tonic and as if $\sharp \hat{4}$ were a momentary LT resolving to its momentary tonic, $\hat{5}$. You will find secondary vii°₆, vii°₇, and vii°₇ chords tonicizing the same degrees you can tonicize with V₇ chords. Secondary LT sevenths are more frequent than vii°₆, and among them vii°₇ is by far the most commonly found chord, in root position or inversion. You may refer to anthology, no. 18 (Amalie, sonata for flute) for an example of a secondary vii°₇. In m. 8 you will see a HC on V, preceded by a $\sharp \hat{4}$ (B\) in the bass. The complete chord is B\=D-F-A, or vii°₇/V. How does this LT chord compare with the other chord on $\sharp \hat{4}$ (B\) in m. 11? What other secondary chord do you recognize in m. 10?

Spelling Secondary Leading-Tone Seventh Chords

To spell the secondary leading-tone seventh chord of a given degree, you build a $^{\circ}_{7}$ or $^{\circ}_{7}$ chord on the pitch a half step below the given degree (that is, on the given degree's leading tone). Let's spell vii $^{\circ}_{7}$ /iv in Gm. The triad we are tonicizing is iv in Gm, and the degree we are tonicizing is $\hat{4}$ in Gm, or C. The pitch a half step below C (that is, the LT of C) is B\!\text{The } \^{\circ}_{7} chord on B\!\text{is } \text{B}\-D-F-A\rangle. This is vii $^{\circ}_{7}$ /iv in Gm.

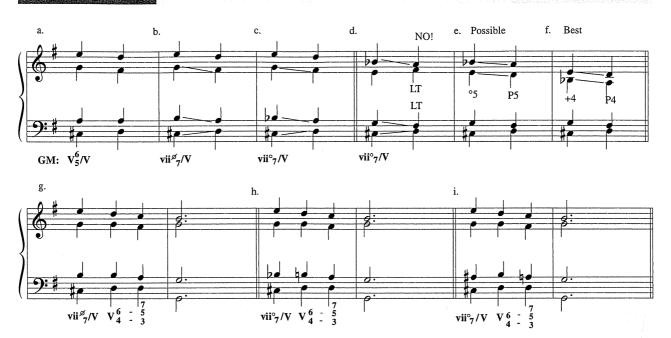
To summarize the process, let's spell vii°_{7}/III in Cm. We are tonicizing $\hat{3}$ in Cm, or Eb. The pitch a half step below Eb is D. The $^{\circ}_{7}$ chord on D is D-F-Ab-C. This is vii°_{7}/III in Cm.

Chord Types, Resolution, and Voice Leading

Example 19.2 illustrates the three possible seventh chord harmonizations of a secondary LT. Choosing V_5^6 , vii°_{7} , or vii°_{7} is totally up to the composer. vii°_{7} may be used to tonicize major triads (such as V or IV), but not usually for minor triads (such as ii or vi). vii°_{7} , on the other hand, appears in tonicizations of both major and minor triads. All three chords stress the LT in the bass, with its strong linear pull. vii°_{7} has the advantage of, in some cases, introducing a new accidental. In example 19.2c, vii°_{7}/V in M introduces $\flat \hat{3}$ besides $\rlap/ \hat{4}$; in example 19.4a, vii°_{7}/IV includes $\rlap/ \hat{2}$ besides $\rlap/ \hat{7}$; and in example 19.4b, vii°_{7}/ii adds $\rlap/ \hat{7}$ to $\rlap/ \hat{1}$. These chords intensify the chromaticism of a passage and also create two strong linear tensions, the LT and the seventh.

Voice Leading

As usual, the secondary LT resolves up, and the seventh down. Otherwise, all the same voice-leading principles (and problems) we studied regarding leading-tone seventh



chords apply to secondary LT sevenths. You may want to review chapter 15 to refresh your knowledge of these principles, especially the resolution of the tritone (root and fifth) and the possible parallel 5ths resulting from the downward resolution of the third in vii°, (see examples 15.4 and 15.7). Resolving the third upward in vii°,/V (or vii°,/V), as in example 19.2d, results in a doubled LT in the V of the resolution, which you want to avoid. Example 19.2e shows a possible resolution with unequal 5ths (which, in vii°, would be faulty parallel 5ths), and example 19.2f shows the best possibility, with 4ths instead of 5ths. (Examples 19.2b and c avoid the problem altogether by voicing the chord differently.)

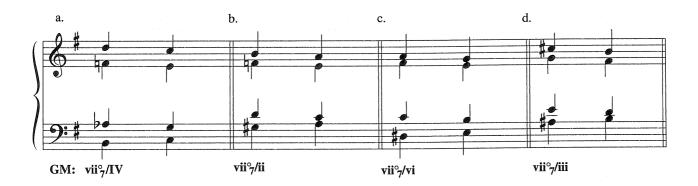
The resolution of vii°_{7}/V or vii°_{7}/V to V_{4-3}^{6-5} , a very frequent occurrence, is illustrated in examples 19.2g to i. You may notice that the notation in example 19.2h is a bit awkward: The seventh, B_{\flat} , first has to go up a half step to B_{\flat} , before resolving down to A. Although awkward, the notation $B_{\flat}-B_{\flat}-A$ is perfectly acceptable and found in many scores. At times, however, composers choose an alternative, and also perfectly correct, notation, which reflects the voice-leading motion better by using the enharmonic A_{\flat}^{\sharp} instead of B_{\flat} , as in example 19.2i.

Study Bach's use of vii° $_7$ /V in example 19.3. In m. 9, beats 2–3, the LT, seventh, and tritone (TT) are perfectly resolved as we would expect. How does Bach deal with the voice leading of the problematic third? Then, in m. 10, notice an interesting possibility: instead of preceding a V_{4-3}^{6-5} figure, as in example 19.2h, Bach's vii° $_7$ /V acts as an ornamental neighbor chord between the $_4^6$ and the $_3^5$, creating a beautiful linear elaboration of V. One more observation before we leave this example: What secondary chord is used at the beginning of the phrase?

J. S. Bach, Chorale 94, "Warum betrübst du dich, mein Herz," mm. 9-10



Example 19.4



Example 19.4 shows some frequently found secondary vii°₇ chords besides vii°₇/V. As we mention above, they all increase the chromatic intensity of the harmony, as well as the dissonant and linear tension of the voice leading. These are all dramatically effective chords.



EXERCISE

To practice spelling secondary diminished seventh chords in root position, refer to exercise 2 in worksheet 19 at the end of this chapter.

Examples from the Literature

The following examples demonstrate the use of the secondary vii°, chord in a variety of contexts. In the Granados fragment (example 19.5), vii°,/ii in m. 43 stands out as the only chromatic harmony in the passage. The voice leading in and out of this

E. Granados, Escenas Románticas, no. 5, mm. 40-48



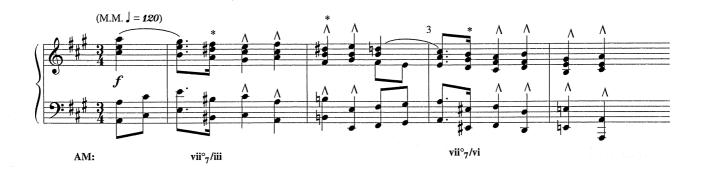
vii^o/ii is perfectly smooth in spite of the broad, open left-hand piano figuration. Notice also the linear function of vii^o/ii as a passing chord between the previous and following chords.

Example 19.6, on the other hand, features vii_7° chords in a more chromatic context. The first one, in m. 5, is also a vii_7°/ii with a passing function. Now look at the resolution of the V_7 at the end of m. 6. Just by altering one pitch in the chord, $\hat{5}$ to $\hat{\sharp}\hat{5}$, the chord becomes a passing vii_7°/vi that connects V_7 with its deceptive resolution to vi (m. 7, beat 2). As we continue listening, however, we realize that all of m. 7 and m. 8 are actually a secondary key area of vi. Analyze these two measures as such, as if vi were the tonic. You will find a deceptive resolution within the secondary key area (in other words, a

J. Lang, Frühzeitiger Frühling, mm. 5–11



R. Schumann, "An Important Event," no. 6 from *Scenes from Childhood*, op. 15, mm. 1–4



deceptive resolution of a secondary dominant, of the type we studied in the previous chapter), as well as a secondary function *within* the secondary key area (specifically, a dominant of the dominant of vi).

The phrase by Schumann in example 19.7 has two parallel phrase segments. What harmony is tonicized at the end of the first phrase segment? Both dotted figures include secondary vii°, chords, of iii in m. 1, and of vi in m. 4. Verify the spelling and resolution of each of them and explain how they connect the previous and following chords linearly.

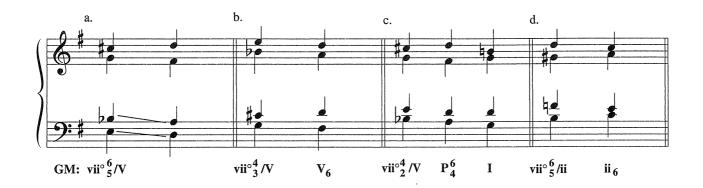
SECONDARY vii^o, CHORDS IN INVERSION

All inversions of the LT seventh chords may in principle be used, and they should all resolve according to the usual conventions of resolution of LT seventh chords. In summary, these are as follows:

1. The bass in viio (the third of the chord) may resolve down to a root-position tonicized chord, or up to a chord in first inversion. In viio / (N, however, the fifth of the chord resolves down, as part of the TT, to the LT, (see example 19.8a). The bass must not, in this case, double 7, so it should not resolve up, but only down. The unequal 5ths that result are awkward, but possible. The same inversion as viio however, is not possible because it would produce parallel 5ths.

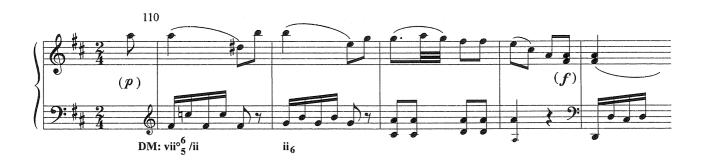
viio tonicizing chords other than V does not present the problem of doubling the LT, so it may resolve up or down without difficulties. In example 19.8d, viio iresolves upward to ii. Compare this resolution with Haydn's identical resolution of the same chord in example 19.9.

2. According to the conventional resolution of the TT between the root and the fifth, vii^{o4}₃, which has the fifth in the bass, should resolve downward to a tonicized chord in first inversion, as in example 19.8b. In example 19.10, Kreisler resolves a vii^{o4}/ii



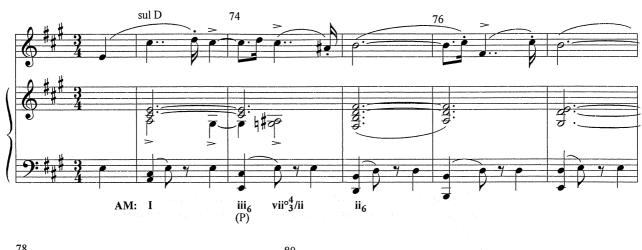
Example 19.9

J. Haydn, Piano Sonata in DM, Hob. XVI:37, III, mm. 110-114



- to ii₆, following exactly the conventions we have studied. Study the voice leading of this chord's resolution, and notice also how Kreisler leads *into* the chord: He takes advantage of all common tones by keeping them sustained, and by introducing a passing chord between I and vii³/ii (iii₆) he can write a nice descending chromatic line in an inner voice. Study the harmonies and voice leading in the passage and, as you play it or listen to it, hear the descending chromatic line in the inner voice.
- 3. vii² has the seventh in the bass, which resolves down to the fifth of the tonicized chord. The resulting ⁶ position will need to be treated as a dissonant ⁶ chord in one of the familiar ways. In example 19.8c, the V⁶ moves on to I as a passing ⁶ chord. In example 19.11, on the other hand, vii²/V resolves to V⁴. Verify the spelling of vii²/V in this phrase. Then, notice that, following the same voice leading we learned in irregular resolutions of secondary dominants, the leading tone in vii²/V becomes the seventh in the following V⁴/₃. After you verify this, why do you think Maurice Jarre

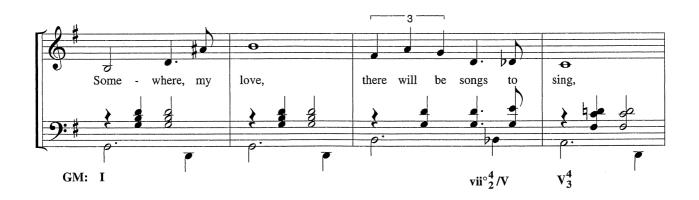
F. Kreisler, Liebesleid, mm. 73-80





Example 19.11

Paul Francis Webster-Maurice Jarre, "Somewhere, My Love," from the Film *Doctor Zhivago* (opening phrase)



chose to spell the secondary LT as D instead of C#? Does this enharmonic spelling make more sense from a melodic point of view?



EXERCISES

To practice spelling secondary diminished-seventh chords in inversion, refer to exercise 2 in worksheet 19 at the end of this chapter.

To practice analyzing figured basses including secondary diminished-seventh chords, refer to exercise 4 in worksheet 19 at the end of this chapter.

To practice realizing progressions including secondary diminished seventh chords, refer to exercises 3 and 5 in worksheet 19 at the end of this chapter.

THE vii^o, OVER A PEDAL POINT

vii°₇ chords are often used over pedal tones, creating a very expressive multiple dissonance. The fragment in example 19.12, from a Bach Prelude in Bbm, features a pedal point on 5. As he does in many other pedal points, Bach writes a vii°₇/V over the pedal at the end of m. 20. Notice the delayed resolution of the right-hand pitches. If you disregard the pedal, what is the inversion of vii°₇ that Bach writes? Does he resolve this inversion as we have learned we should? To what position of V (again, disregard the

Example 19.12

J. S. Bach, Prelude 22 in Bbm, from *The Well-Tempered Clavier*, I, mm. 20-24

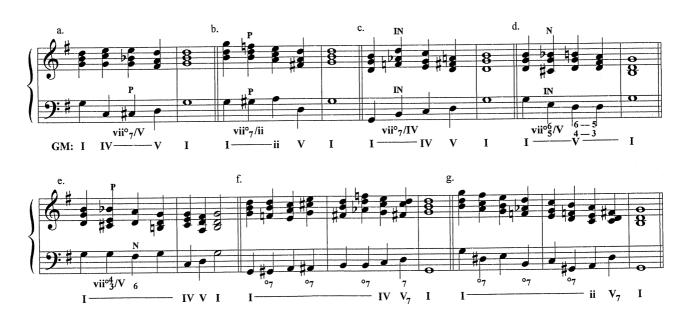


In anthology, no. 56 (C. Schumann, Trio) you may see examples of vii°, over a î pedal. What degree does the vii°, over î in m. 265 tonicize? What is the inversion of this vii°,? Find the two appearances of the same secondary chord, also over î, in mm. 275–278. What other vii°, chord does Clara Schumann use repeatedly, over the same tonic pedal, in mm. 276–281?

ELABORATING THE I-V-I PROGRESSION

As it was the case with secondary dominants, secondary leading-tone seventh chords usually function as chromatic elaborations of a diatonic chordal frame. As an illustration, the progressions in example 19.13a to c show three root-position secondary leading-tone seventh chords elaborating the I–V–I progression. In examples 19.13a and b, the secondary vii^o, chords function as passing chords, and in 19.13c it functions as an incomplete neighbor chord. Examples 19.13d and e feature elaborations of the I–V–I progression by means of vii^o, chords in inversion. Finally, a variety of chromatic sequences can use secondary leading-tone seventh chords. Examples 19.13f and g show two cases of chromatic linear extension of the opening tonic in the I–V–I progression by means of sequences using secondary leading-tone seventh chords.

Example 19.13



A CHROMATIC HARMONIZATION OF A DIATONIC TUNE: BACH, CHORALE 21

As a summary of secondary LT chords, we now go back to an example we looked at a long time ago: example D.1a, reproduced again as example 19.14. Now we have all the tools we need to understand this beautiful chorale phrase. First sing the tune (the soprano line) and notice how simple and diatonic it is. Then play or listen to the harmonization and notice how chromatic it is, and how much intensity and drama is added to the melody through this chromaticism. First analyze the chorale harmonically, and *then* continue reading.

- 1. The beginning and end of the phrase tell us that it is in Am. In m. 1, beat 2, a vii°₇ chord tonicizes iv. Does the tonicization of iv continue? How do you hear the cadence in m. 2? It sounds like a HC in the key of iv (Dm). What specific kind of HC (consider the previous chord and bass note!)? The whole fragment from m. 1, beat 2, to the first fermata is, then, a *secondary key area of iv*. What kind of tonicizing chord appears in m. 1, beat 4, and how does it function linearly?
- 2. The chords in m. 3, beats 1–3, tonicize V. What is the first of these chords? The third one? What chord is used to connect them, in what position is it, and how does it function linearly? Notice the voice exchange figure characteristic of this type of linear function.
- 3. The annotations under example 19.14 show the long-range tonal plan for the phrase. Seen from this perspective, the tonal motion is an extended i₆—iv–V–i, in which iv and V appear as tonicized secondary areas. This phrase thus represents an extended chromatic elaboration of the i–iv–V–i progression.



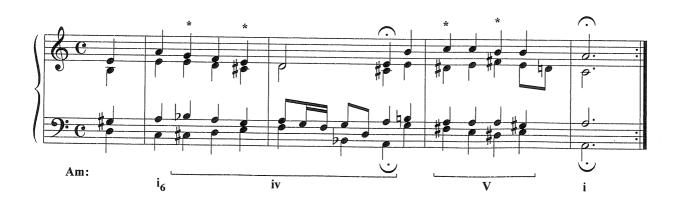
EXERCISES

To practice harmonizing a melody including secondary diminished seventh chords, refer to exercise 6 in worksheet 19 at the end of this chapter.

To practice analysis of musical fragments including secondary diminished seventh chords, refer to exercise 1 in worksheet 19 at the end of this chapter.

Example 19.14

J. S. Bach, Chorale 21, "Herzlich thut mich verlangen," mm. 1-4



PRACTICAL APPLICATION AND DISCUSSION

Secondary Functions in Context: Two Songs by Mozart

1. Telling a story through harmony: "Wie Unglücklich bin ich nit" (anthology, no. 29).

We will use this Mozart song to illustrate the role of secondary functions in a long-range tonal structure and their relationship to the text. First, read the text. Then, analyze the complete song harmonically (use Roman numerals). Break the song into harmonic phrases (units). What is their tonal direction? How do they correspond with textual units and phrases? Can we tell a story through harmony? How does Mozart use chromaticism as a dramatic means?

- a) Harmonic unit 1, mm. 1–4. This phrase establishes the key, by means of mostly diatonic progressions leading to the PAC in m. 4. The words in mm. 3–4 are "how languishing are my steps." How does the voice leading depict these words musically? See, for instance, the static lines, the dragging half-step motion in the bass (the only chromaticism in the whole phrase), and also the repeated G in the voice part, the lowest point in the section.
- b) Harmonic unit 2, mm. 5–6. What happens harmonically in this section? It is all a secondary key area of V, leading to a PAC on a tonicized V in m. 6. The music has turned away from the tonic and moved toward the dominant. The text in these measures is: "When I turn them (my steps) toward you"!
- c) Harmonic unit 3, mm. 7–10. "Only my sighs console me." The music is chromatic, with half steps in the bass and the voice part (the sighs, of course), and with the expressive vii°, tonicizing ii. Notice, in m. 7, the change of position within vii°,/ii by means of a voice exchange and a passing 4. Tonally, this unit takes us back toward the tonic. The "moving toward you" was short-lived; there does not seem to be much of a response from "you"! When we get back to the tonic, however, the words are "all my pains multiply." So the tonic that we reach in m. 9 is in minor mode, a sad and chromatic tonic, with numerous half-step sighs. The section closes on a tonicized HC on V (perhaps a sign of hope?).
- d) Harmonic unit 4, mm. 11-15. So, is there hope? If I cannot be with "you," at least I can think of "you," and that is apparently as positive as things will get. So, to the words "when I think of you," the mode becomes major again, and the harmony diatonic, to the end of the song.
- e) In summary, this song (1) establishes I, (2) moves away from I to V, (3) returns to the tonic, now minor, through a tonicization of ii, and (4) reaffirms I diatonically in a closing phrase. And all of this is telling a story through harmony, through chromaticism, and by means of secondary functions, tonicization, and changes of

mode. Listen again to the song, or even better perform it, hear the long-range tonal motions, the tonal direction of phrases, and, most important, *hear the story* as it is told by the music!

2. Long-range tonal plan in "Die Zufriedenheit" (anthology, no. 30).

We can now study in more detail a piece which we already discussed in chapter 11. Analyze "Die Zufriedenheit" harmonically and formally, and review example 11.8 and the brief discussion of the song's phrase structure that accompanies that example in chapter 11. You will remember that the song has three phrases, clearly delineated by rests. Sing the melody several times, and discuss the form of the song motivically and thematically (assign letters to the phrases, indicating their formal relationship). If you consider the beginning and ending harmonies (cadences) for each phrase, what is the long-range tonal plan for the song? Within this harmonic plan, what harmonies are tonicized? After you think about these matters, you may discuss them in class and read the following notes.

- a) The song has three phrases (mm. 1-5, 6-9, and 10-14). Phrases 1 and 2 are unrelated thematically. Phrases 2 and 3 are related motivically (see mm. 6-7 and 10-11). We can express the form by the letter scheme $a-b_1-b_2$.
- b) Phrase I begins with a prolongation of I: on a Î pedal, I is prolonged by a N₄⁶ and V₃⁴. V is tonicized at the cadence (m. 5) by means of a brief secondary key area of V, a cadential figure ii₆-V₄₋₃⁶⁻⁵-I "of V" (or "in DM"). The long-range motion of phrase 1 is then I-V.
- c) Phrase 2 begins and ends on V, and it all can be interpreted as a prolongation of V leading to the HC in m. 9. ii is tonicized in mm. 6–7.
- d) Phrase 3 begins and ends on I. The phrase is a prolongation of I, including two tonicizations of IV in mm. 10-11.
- e) The long-range tonal plan is, then, as follows:



In other words, in phrase 1 I is *established*, and we *move* away to V by the end of the phrase. In phrase 2, V is prolonged throughout, creating a central area of *tonal contrast* (and also of tonal tension) ending on a HC. In phrase 3, we *return* to I and we stay there. This short song is thus based on the same general tonal plan that may be found underlying most of the formal schemes in the music of the eighteenth and nineteenth centuries: **establishment** of the tonic, **departure** from the tonic, **return** to the tonic.

- f) Listen to the song and/or perform it in class if possible. Hear the three phrases as harmonic/tonal units, hear their long-range motion, and the general tonal plan of the song. How is this discussion helping you understand the unity of this composition? If you perform it, how is it helping you with the interpretation and rendition of the phrases? Does it help you be aware, for instance, that all of phrase 2 is an extension of the V cadence in m. 5 (hence a "departure from"), creating a tension
- toward the return in phrase 3? Does it help to hear in this way the *direction* of the music?
- g) If you are currently performing some short piece or movement on your instrument in which you can identify the same basic tonal scheme (establishment, departure, return), bring it to class, perform it, explain how you hear its overall tonal plan, and discuss how being aware of the plan might affect your performance.

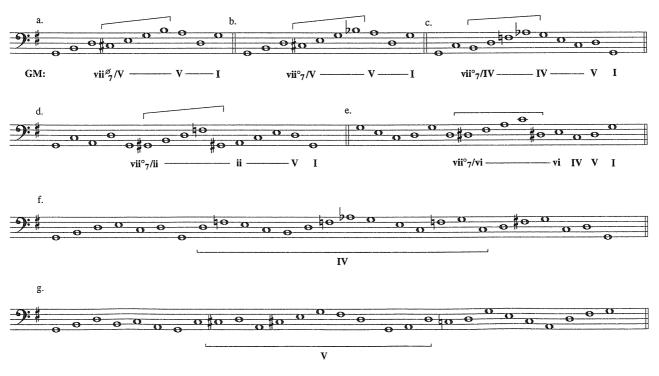
ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 19 in the workbook.

PITCH PATTERNS

Sing the pitch patterns in example 19.15, hearing the secondary LT seventh chords and their tonicizing effect. In examples 19.15f and g, hear the bracketed fragments as secondary key areas of IV and V, respectively.

Example 19.15



Secondary leading-tone chords
Secondary leading-tone seventh chords:
spelling, resolution, voice leading,
inversions

vii°, over a pedal point
The "establishment-departure-return"
tonal paradigm



EXERCISE 1 Analysis.

- 1. Refer to anthology, no. 25 (Mozart, Sonata in CM, I).
 - a) What two degrees are tonicized in mm. 13–14? Provide Roman numerals (RNs) for each secondary chord and its resolution in each measure.
 - b) The key beginning in m. 35 is GM. In this key, what is the secondary chord in m. 50, and how does it resolve?
 - c) Think of mm. 73–74 as a secondary key area of vi, or Am. *In this key*, provide RNs for the tonicization in m. 74.
 - d) The key in mm. 103–108 is Cm. Provide RNs for the complete passage. Be careful to identify all nonchord tones: The harmonic rhythm is a chord per measure.

Example 19.16

M. Szymanowska, Nocturne in BlM, mm. 27-31



2.	Identify with RNs all the tonicizations and secondary	fui	nctions	in	the	following
	examples.					

a) Anthology, no. 31 (Paradis, Sicilienne), mm. 19–23.

b) Example 19.16.

c) Example 19.17.

1) What happens to the mode after m. 32?

2) Label the tonicizations in the following measures:

Mm. 30-31:

Mm. 34-35:

Mm. 35-36 (Can this be a secondary key area? Why?):

Mm. 38-39:

3) What familiar progression can you identify in mm. 36-37? Comment on the voice leading required in this particular type of progression, and verify it in these measures.

Carl Friedrich Zelter, "Abschied," mm. 28-39



EXERCISE 2 Write the following secondary diminished seventh chords in four voices.

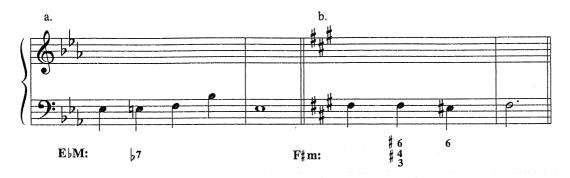


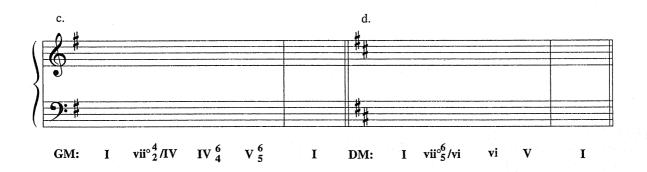
 $FM: \ vii^{\circ}{}_{7}/V \quad Cm: \ vii^{\circ}{}_{7}/III \quad GM: \ vii^{\circ}{}_{7}/IV \quad Gm: \ vii^{\circ}{}_{7}/ii \quad Bm: \ vii^{\circ}{}_{3}^{4}/iv \quad A^{\downarrow}M: \ vii^{\circ}{}_{2}^{4}/IV \quad B^{\downarrow}M: \ vii^{\circ}{}_{5}^{6}/V \quad C^{\sharp}m: \ vii^{\circ}{}_{2}^{4}/V$



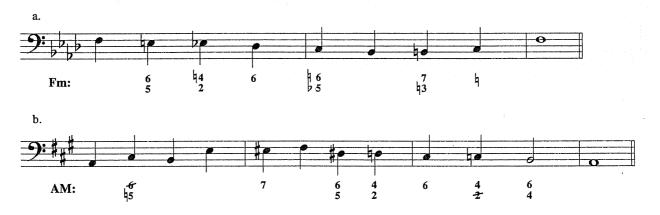
 $E \downarrow M: \quad vii^{\circ}{}_{3}^{4} / vi \qquad DM: \quad vii^{\circ}{}_{5}^{6} / ii \qquad F \sharp m: \quad vii^{\circ}{}_{3}^{4} / III \qquad D \downarrow M: \quad vii^{\circ}{}_{2}^{4} / vi \qquad Am: \quad vii^{\circ}{}_{5}^{6} / iv \qquad Em: \quad vii^{\circ}{}_{3}^{4} / III \qquad Dm: \quad vii^{\circ}{}_{2}^{4} / Vi \qquad Am: \quad vii^{\circ}{}_{3}^{6} / iv \qquad Em: \quad vii^{\circ}{}_{3}^{4} / III \qquad Dm: \quad vii^{\circ}{}_{2}^{4} / Vi \qquad Am: \quad vii^{\circ}{}_{3}^{6} / iv \qquad Em: \quad vii^{\circ}{}_{3}^{6} / III \qquad Dm: \quad vii^{\circ}{}_{2}^{6} / Vi \qquad Am: \quad vii^{\circ}{}_{3}^{6} / iv \qquad Em: \quad vii^{\circ}{}_{3}^{6} / III \qquad Dm: \quad vii^{\circ}{}_{2}^{6} / Vi \qquad Am: \quad vii^{\circ}{}_{3}^{6} / III \qquad Dm: \quad vii^{\circ}{}_{3}^{6} / III$

EXERCISE 3 Realize the following short progressions in four voices, and provide RNs where needed.

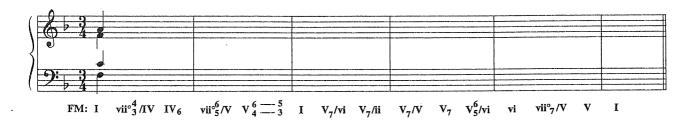




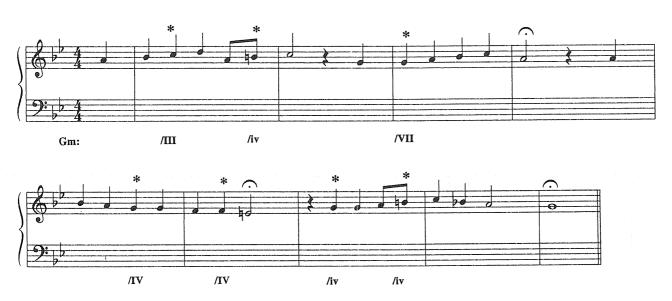
EXERCISE 4 Write the correct RNs for the following figured basses.



EXERCISE 5 Realize the following progression in four voices. Double-check your outer-voice frame for good counterpoint.



EXERCISE 6 Harmonize the following melody (based on Bach's Chorale "O grosser Gott von Macht") in four voices, in chorale style. The melody allows for various tonicizations, some of which are indicated under the staff. Use some kind of a secondary chord (a secondary dominant or, where possible, a secondary diminished seventh) to harmonize the indicated pitches.



Chapter 20

Modulation to Closely Related Keys

So far we have studied only music that stays in the same key. Because the change of key center for a tonicized chord or a secondary key area is only momentary, it does not really displace the main key center of the passage. Complete pieces, however, rarely remain in the same key. Changing the key center within a composition provides tonal variety to the music and often is a major element in long-range formal designs. The process of moving from one key center to another is known as **modulation**. In chapters 21 and 28 we will see that in formal types such as binary, sonata form, and rondo, large-scale tonal plans (achieved by means of modulation) are essential to the definition of form. And in chapter 22 we will see that in contrapuntal genres such as the invention and the fugue, modulation is a fundamental component in the processes of formal growth and development.

It should be stressed that modulation implies a change of key center. A **change of mode** between parallel keys, as between CM and Cm, is not considered a modulation, because the key center does not change (C in both cases). We should also note that the exact difference between a secondary key area and a modulation is not always clear. In general, a modulation will take place if the new key is clearly established by a complete pre-dominant/dominant/tonic progression, and preferably if it is confirmed unequivocally by means of an authentic cadence. These factors of tonal confirmation create a clear sense of a new key, as opposed to secondary key areas, where the presence of the main key is still felt. In this chapter we will study some of the most frequent techniques used by composers in modulations among *closely related keys*.

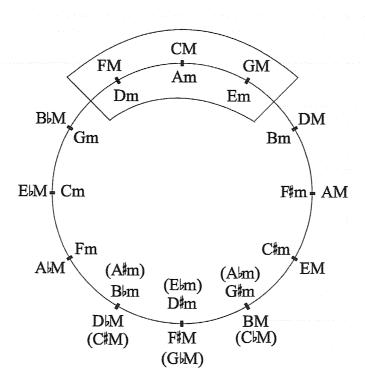
KEY RELATIONSHIPS: CLOSELY RELATED KEYS

Motion from one key to another is often accomplished in a smooth way, by means of a variety of techniques that make the key change as musically and perceptually logical as possible. A smooth modulation will be easier to accomplish if the scales of the keys involved are very similar in pitch content. The most similar scales occur between keys that either have the same key signature (such as CM and Am, the relative major/minor

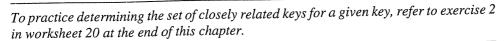
relationship), or the key signatures do not differ by more than one accidental (such as CM and GM/Em, a one-sharp difference, or CM and FM/Dm, a one-flat difference). Groups of keys whose signatures do not differ by more that one accidental are **closely related. Distantly related keys**, on the other hand, feature key signatures that differ by more than one accidental, such as CM and EM, A\(^{\bar{b}}M\), or C\(^{\bar{c}}m\).

The five keys that are closely related to any given key are its relative M/m key, those adjacent above and below this key in the circle of fifths, and their respective relative M/m keys, as illustrated in example 20.1. Thus, the keys closely related to DM are its relative minor Bm, AM (a fifth above D) and its relative minor F#m, and GM (a fifth below D) and its relative minor Em. The same system applies to minor keys: The keys closely related to Dm are its relative major FM, Am (a fifth above D) and its relative major CM, and Gm (a fifth below D) and its relative major BbM. Verify all these relationships in the circle of keys reproduced in example 20.1. From a different perspective, notice also that the closely related keys are those whose tonic triad is one of the diatonic major or minor triads within the original key. In CM, for instance, the closely related keys are Dm, Em, FM, GM, and Am, corresponding with all the major or minor triads that result from the CM scale.

Example 20.1



EXERCISE





DIATONIC PIVOT CHORD MODULATION

Examine now example 20.2. Analyze the first four measures with Roman numerals (RNs), and you will see that the key of BbM is clearly established by means of a standard diatonic progression that leads to the authentic cadence in mm. 3-4. The key is confirmed at the end of the initial period with a perfect authentic cadence (PAC) (mm. 9-10). The beginning of the new phrase in m. 11 is almost identical to m. 1. In mm. 12-13, however, we find an extended V₇ in FM, which indeed resolves to I in m. 14. The following measures confirm the new key, FM, by means of a series of $\mathrm{V_2^4}\text{-}\mathrm{I_6}$ progressions. The key center has thus changed from Bb to F. The modulation from BbM to FM, however, has been effected very smoothly and in a musically natural way. If you examine mm. 11-12, you will notice that we hear the first chord in m. 11 clearly as I in BbM. In m. 12, however, we hear that a resolution to FM is coming, not only because of the clear V₇, but also because of the melodically striking E\(\) (compare it with the equivalent Eb in m. 2). How does the chord in between (m. 11, beats 1-2) function? In m. 1 we heard the same chord functioning as vi₆ in B₂, and this is also how it functions in m. 11. In retrospect, however, we also hear this same chord as ii_6 , moving on to V_7 , in FM. The chord then has a double function, serving as a diatonic pivot chord between the two keys, that is, a chord that has a diatonic function in both of the keys for which it acts as a connection.

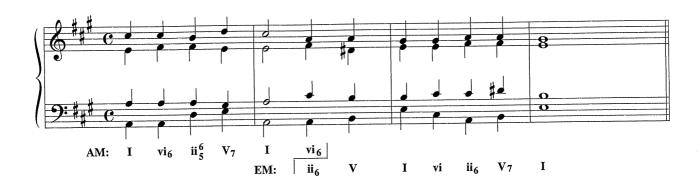
The modulation that we have just studied is a diatonic pivot chord modulation, and it contains all the elements of a correct, smooth modulation:

- 1. The first key is established harmonically with a progression that includes a V-I and is preferably confirmed by an authentic cadence (notice that a key is not really established unless there is a V-I progression that defines it unequivocally).
- 2. A diatonic pivot chord connects the old key with the new key. A diatonic pivot chord is a chord that has a diatonic function in both keys. Modulations often involve more than one single pivot chord. In example 20.2, for instance, the initial BbM I in m. 11 can also be interpreted as a IV in FM, thus providing us with the perfectly standard progression $IV_{-ii_6-V_7}$ in FM. Measure 11 thus actually contains two diatonic pivot chords (I-vi₆ in BbM become IV-ii₆ in FM).

Any chord common to both keys can conceivably be a diatonic pivot chord. The best chords, however, are those that function as pre-dominants in the new key, because they can be naturally followed by the new dominant. The dominant of the old key, on the other hand, is a possible pivot chord, but it is not normally a good one, because it requires resolution to the tonic of the old key, and resolving it otherwise usually breaks the functional logic of the harmonic phrase.

W. A. Mozart, Piano Sonata in BbM, K. 333, I, mm. 1–16





The double function of pivot chords will be indicated visually by means of a "bracket" (as indicated in both examples 20.2 and 20.3), which allows for the notation of both its old and its new functions.

3. The new key is itself established harmonically with a progression including V–I and is confirmed by further progressions or preferably by an authentic cadence.

All the preceding elements are clearly summarized in the modulating progression in example 20.3. (In our schematic examples of modulations in this and other chapters, keys will be minimally established by means of a simple progression.) Observe that in this example we could also label two diatonic pivot chords: I–vi₆ in AM become IV–ii₆ in EM.

EXERCISE

To practice determining the pivot function of a chord between two keys, refer to exercise 3 in worksheet 20 at the end of this chapter.



Determining the Diatonic Pivot Chord

The process we have followed to analyze the Mozart modulation shows you the way to determine a diatonic pivot chord:

- 1. Find the first chord that clearly indicates that we are moving to a new key (in the Mozart example, the V_7 in m.12). Typically (although not always), this "first chord" in the new key will contain an accidental.
- 2. Look at the chord immediately before this clear sign of a new key, and read it in both the old key and the new key. If you find more than one chord that can be read in both keys, you may interpret them as a pivot group.
- 3. In other words, the best way to determine the pivot chord is to analyze the passage from the beginning (in this case in B\(\text{M} \)) and from the end (in FM) at the same time,

and see where the two keys "meet" by means of a common element that acts as a diatonic pivot. In our discussion, the "meeting point" turned out to be clearly the second chord of m. 11, or also possibly all of m. 11. We will practice this process many times in the course of this chapter.

MODULATION TO V

We will refer to keys by the Roman numeral that represents their relationship to the original key. Thus the modulation to the key of the dominant (from CM or Cm to GM) will be "to V," or also $I \rightarrow V$. A modulation from a major key to its relative minor (CM to Am) will be $I \rightarrow vi$, and from a minor key to its relative major $I \rightarrow III$. The supertonic key is ii, and a modulation to this key from a major key (CM to Dm) will be I to ii, or $I \rightarrow ii$. And so on.

I to V

The most common modulation from a major key is to the key of the dominant, V. This is the modulation we discussed in example 20.2. Refer now to example 20.4. EbM is established in mm. 6–9, and the fragment ends on a PAC in BbM. In m. 9 we hear the Eb chord as I in EbM, but in mm. 10–11 two dominant-tonic progressions in BbM leave little doubt we are modulating to V, as the cadence in mm. 12–13 confirms. What are the exact Roman numerals for the chords that establish BbM in mm. 10–11? Notice that the resolution to I in m. 11 is preceded by a triple nonchord tone sonority in the right hand, beats 1 and 2, creating an "appoggiatura chord," a "chord of nonchord tones (NCTs)" that resolves in beat 3. Explain each of the three pitches as individual NCTs.

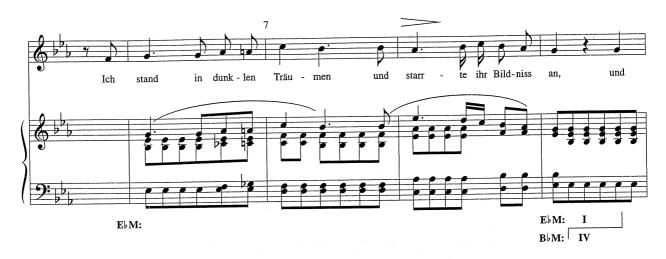
Because m. 9 is I in EbM, and m. 10 already establishes BbM, the only possible chord that may be interpreted as a diatonic pivot chord is precisely the Eb chord in m. 9, which will be I in EbM and IV in BbM. This is a common pivot chord in the modulation from I to V, allowing for a very direct and quick switch of tonal center. Study this type of modulation as shown, in chorale style, in example 20.5.

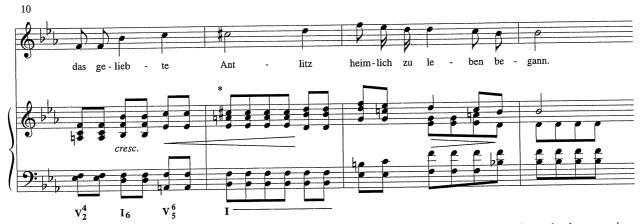
To understand the possible diatonic pivot chords between two keys that hold a I–V relationship, you can imagine the triads in both CM and GM. By comparing their pitch content you can determine which triads are common to both keys.

Triad on	C	D	E	F(F#)	G	A	В
CM	I	ii	iii	IV	${f V}$	vi	vii°
GM	IV	V	vi	vii°	Ι	ii	iii

The triads that include an F# in GM (V, vii°, and iii) are not found in CM, and they are indicated in italics in the preceding chart. These three triads are not possible pivot chords because they are not common to both keys. The remaining four triads (in bold face), on the other hand, are common to both keys. Because V in the original key is not usually the best pivot (it calls for a resolution to the original tonic), the preferable pivot chords are then I/IV, iii/vi, and vi/ii, all of which can function as pre-dominants in the new key.

C. Schumann, "Ich stand in dunklen Träumen," mm. 6-13





I stood in dark dreams and gazed at her portrait, And the beloved features mysteriously came to life.

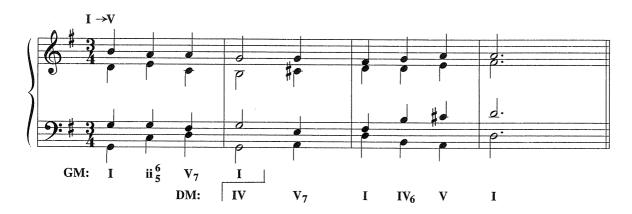
EXERCISE

To practice analyzing a modulation to V from a given modulating bass line, refer to exercise 4a in worksheet 20 at the end of this chapter.



Modulating from V Back to I

After having modulated from I to V, say CM to GM, sooner or later the music is likely to return to the original "home key" by means of a V to I modulation, GM to CM, that is, up a P4. Refer to anthology, no. 28 (Mozart, Piano Sonata in B\bar{M}, III). The movement is in B\bar{M}. The section beginning in m. 24 and ending with a PAC in mm. 35–36, however,



is in FM, the key of V. First, discuss in class the modulation from BbM to FM, in mm. 20–21. Although you can explain it as a pivot chord modulation, you will notice that, in m. 20, the element that leads our ear toward FM is not so much a pivot chord process as a single, unaccompanied pitch. The *melodic introduction of the leading tone in the new key* is sometimes a sufficiently strong factor to support a modulation.

Beginning in m. 41 of this same example you will see that the original material returns, again in $B
 \downarrow M$, although just a few measures earlier the previous section closed on a strong PAC in FM. How did we go back to the "home key"? If you disregard the series of ornamental chromatic passing tones in mm. 37–38, all that happens from m. 36 (I in FM) to m. 39 is that the pitch $E
 \downarrow$ is added to the FM triad, turning it into V_7 of $B
 \downarrow M$. Because in the modulation $V \rightarrow I$ the tonic in the original key is the same chord as the dominant in the new key, this is the most commonly (and effectively) used diatonic pivot chord for this modulation, as summarized in example 20.6.

Example 20.6



NOTE



It is interesting to observe that the modulation from the tonic directly to the subdominant key (I to IV) is quite unusual. If you think of it, however, as a modulation a P4 up, the relationship between keys is the same as in V back to I (a P4 up). In both cases (I to IV and V to I) the tonic in the first key is the same as the dominant in the second key. Practice writing or playing a modulation from GM (I) to CM (IV) using I in GM as the pivot chord.

MODULATION TO THE RELATIVE MAJOR AND MINOR KEYS

The most common modulation from a minor key is not to the key of the dominant, but rather to the relative major key, i to III. Because these two keys share the same scale, with the only exception of the raised $\hat{7}$ (the leading tone) in harmonic minor, the possible diatonic pivot chords are many, and the modulation is easily effected. The chart below illustrates the triad relationships in CM and Am, indicating the possible diatonic pivot chords in bold face.

Triad on CM							
Am	Ш	iv	V	VI	vii°	i	ii°

The only triads in this chart that do not qualify as diatonic pivots are those in Am that include a G#, that is, V and vii°. Otherwise, all the remaining triads can be used in the modulation between these keys. Example 20.7 illustrates several of these modulations schematically. Play or sing these modulations in class and hear the different double functions of the various pivot chords.

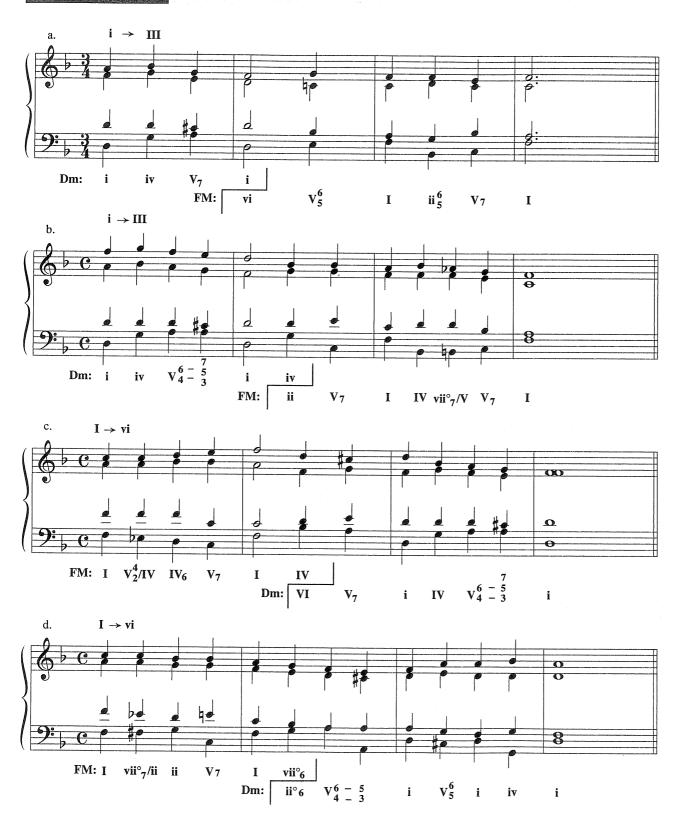
i to III

Example 20.8 shows how simple and direct the modulation from i to III can be. The first phrase establishes Bm and cadences in this key in m. 5. This same tonic chord is immediately reinterpreted as vi in the relative major, DM, and used as a pre-dominant moving to V₇ of DM in mm. 6–7. Refer to anthology, no. 11 (Bach, French Suite no. 3, Minuet), and study the modulation between these same two keys, Bm and DM, in mm. 1–16. Reading the music from the beginning, in Bm, you will find that the last clear sign of this key is the progression in mm. 12–13. Reading from the end, in DM, we see that the key is established in the last three measures of the passage, beginning with the V in m. 14. What is, then, the diatonic pivot chord, and how does it function in both keys?

EXERCISE

To practice writing a modulation from i to III from given Roman numerals, refer to exercises 4b and 6 in worksheet 20 at the end of this chapter.





J. Haydn, String Quartet op. 64, no. 2, Menuetto, mm. 1-14





F. Schubert, "Am Feierabend," from Die schöne Müllerin, mm. 45-59



I to vi

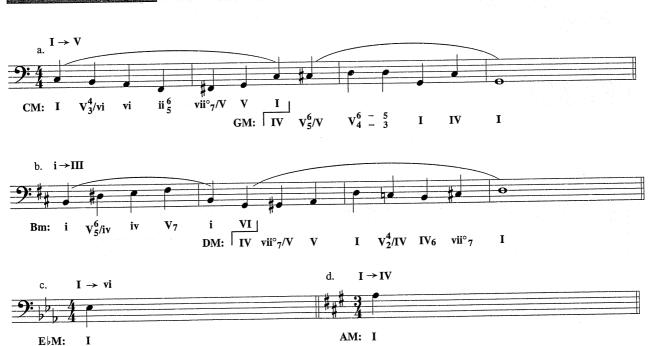
The modulation from a major key to its relative minor, or I to vi, can use any of the same pivot chords we indicated in the preceding chart. The passage by Schubert reproduced in example 20.9 begins in FM and ends in Dm (the song as a whole is in Am). Measure 51 features the last FM tonic, whereas the cadence in Dm first appears in mm. 55–56. The two chords in between can be analyzed as diatonic pivot chords. What are the functions of these chords in each of the keys? Now look at the relationship between this modulation and the text. The boy speaking is a worker at a mill, sitting with his fellow workers in the quiet evening hour of leisure in the presence of the miller and the lovely millermaid. The translation of the text is as follows: "And the master speaks to all: your work has pleased me. And the maiden, my delight, wishes all a good night." How is the master represented tonally? What are the characteristics and register of the master's melody? Compare all of these with the music depicting the millermaid: How is the text reflected in the key, the harmonic progression, the melody, and the register?

We will now practice writing modulating progressions using diatonic pivot chords. We will write these progressions in the usual form of a bass line with Roman numerals, following this procedure:

- 1. Write a progression in the original key, using any of the chords you have learned so far, including secondary dominant functions. The progression should establish the key by means of at least one pre-dominant/dominant/tonic chordal unit.
- 2. Think of a possible chord common to both keys that you may use as a diatonic pivot in the modulation. Write the chord and provide its double interpretation by means of the usual pivot symbol.
- 3. Write a progression in the new key. Establish the key immediately. Ideally, your pivot will act as pre-dominant in the new key and will lead to a dominant-tonic progression. After the key is thus established, continue the progression as you wish, and close with an authentic cadence (or perhaps a plagal cadence) that confirms the new key.

Study (and play if possible) the modulating progressions proposed in example 20.10. Then write a couple of modulating progressions in the spaces provided, using the keys indicated in each case.







EXERCISE

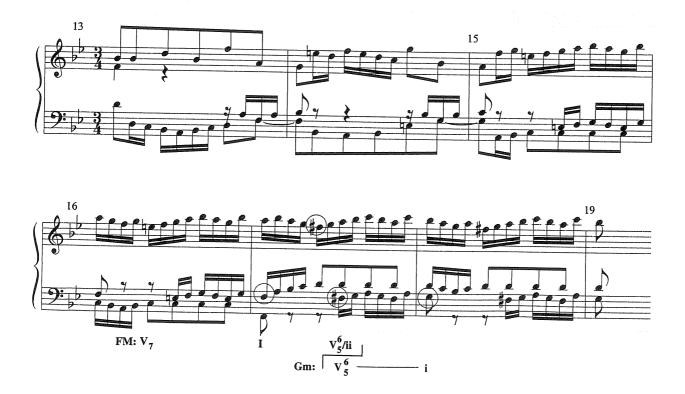
To practice writing your own diatonic pivot-chord modulations, refer to exercises 7a and 7b in worksheet 20 at the end of this chapter.

CHROMATIC MODULATION: CHROMATIC PIVOT CHORDS

Modulations from a major key to the submediant and mediant keys are not quite as frequent as those we have studied so far, because they do not have the structural, form-defining role of modulations to V or to the relative major. They both can be effected by means of diatonic pivot chords. More often, however, modulations to ii or iii are of the type known as chromatic. Consider, for instance, the modulation from FM to Gm in example 20.11. Measure 17 begins on an FM tonic chord, which is not a possible diatonic pivot with Gm. The introduction of the pitch F^{\sharp} , $\sharp \hat{2}$, in the outer voices, and its subsequent resolution to the Gm tonic chord in the next measure announce the modulation to ii, confirmed by the

Example 20.11

J. S. Bach, Fugue 21 in BlM, from *The Well-Tempered Clavier*, I, mm. 13–19



repetition of the cadence. From a voice-leading point of view, the modulation proceeds by melodic chromatic motion: the F in m. 17 becomes F#, the leading tone in the new key, leading to G. From a harmonic point of view, there is no diatonic pivot chord in this modulation. We can speak, however, of a **chromatic pivot chord**. This is a chord that is chromatic (such as a secondary dominant) in one, or both, of the keys. In our example, the chord in beats 3–4 of m. 17, which includes the chromatic F#, is chromatic in FM (V_5^6/ii) and diatonic in Gm (V_5^6) . In other words, we first hear the dominant of the new key, Gm, as a secondary dominant, and only after that do we realize that it is actually a modulation. This modulation, then, is achieved by means of both chromatic voice leading (F to F#) and a chromatic pivot chord.

A **chromatic modulation** to a closely related key is one in which one or both of the following conditions apply:

- 1. The main modulating procedure is ascending linear chromatic motion in at least one voice, which normally introduces the leading tone of the new key.
- 2. The pivot chord is not diatonic in both keys. It is frequently a secondary dominant or diminished seventh chord in the first key, while being the diatonic (primary) dominant or diminished seventh chord in the new key (the dominant of the new key is first introduced as if it were a secondary dominant in the original key, but then the new key is confirmed).

Three chromatic modulations are schematically illustrated in example 20.12.

Chromatic modulations are not exclusive to tonal motions to the keys of iii or ii. The modulation to V is often effected chromatically (can you figure out and explain a possible chromatic modulation from I to V?). Example 20.13, moreover, features a modulation from GM to its relative minor, Em, which includes not only chromatic voice leading, but also a chromatic pivot chord. GM is established in m. 4. What linear chromatic motion leads to Em in the next measure? The dominant in m. 5, beat 1, is diatonic in GM but not in Em. The second chord, on the other hand, is diatonic in Em, but not in GM. No diatonic pivot is present in this modulation. What is the chromatic function of this second chord (on the bass pitch B) in GM?

EXERCISE

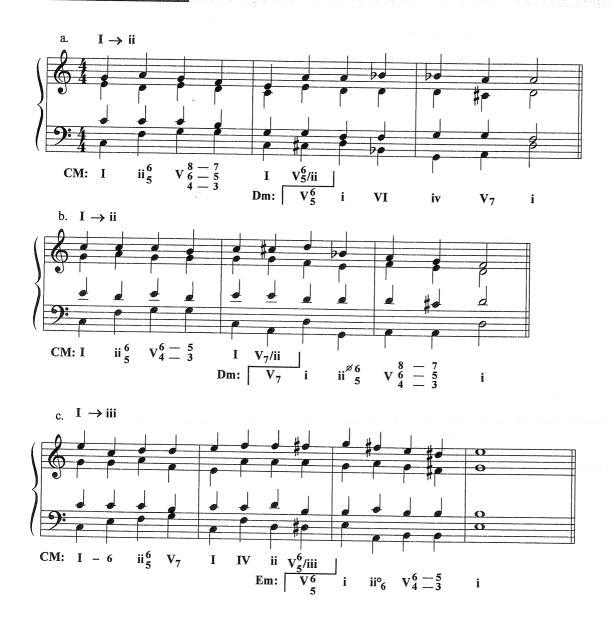
To practice analyzing a chromatic modulation from a given modulating bass line, refer to exercise 5 in worksheet 20 at the end of this chapter.



WRITING CHROMATIC MODULATIONS

The following steps to write chromatic modulations to ii and iii are illustrated by the progressions in example 20.12. After you study these examples, practice writing your own chromatic modulations from a major key to the keys of ii and iii.

- 1. First establish the original key in the usual way.
- 2. Write a chromatic motion in the bass introducing the new leading tone. If you want to modulate to ii, the bass may move directly from $\hat{1}$ to $\sharp \hat{1}$, and on to $\hat{2}$



(example 20.12a). If the modulation is to iii, the bass should not move, of course, from $\hat{1}$ to #2 (an augmented second). A bass motion $\hat{1}$ – $\hat{4}$ – $\hat{2}$ –#2–#3, for instance, allows for a good harmonization that will also produce another chromatic motion ($\hat{4}$ –#4) in an upper voice, besides the bass's $\hat{2}$ –#2: I–IV–ii– V_3^6 /iii–iii, and on to confirm the key of iii (example 20.12c).

J. S. Bach, Chorale 167, "Du grosser Schmerzensmann," mm. 3-8



- 3. If you do not want to write the chromatic motion in the bass, introduce the dominant of the new key in root position first as a secondary dominant in the original key, and do not return to the original key, but move on to confirm the modulation (example 20.12b).
- 4. Finally, confirm the new key with a good progression and a cadence.

EXERCISE

To practice writing your own chromatic modulation, refer to exercise 7c in worksheet 20 at the end of this chapter.



MODULATION AND PHRASE STRUCTURE: SEQUENTIAL AND PHRASE MODULATION; MODULATING PERIODS

Modulations have a primary role in formal processes. Long-range tonal designs are realized by means of modulatory processes that provide tonal direction to complete movements. In the next chapter we will study some formal paradigms and see that they are closely associated with long-range tonal schemes. At a more local level, however,

tonicization and modulation often have a structural role in generating phrase and period structures, as we will discuss in the following examples.

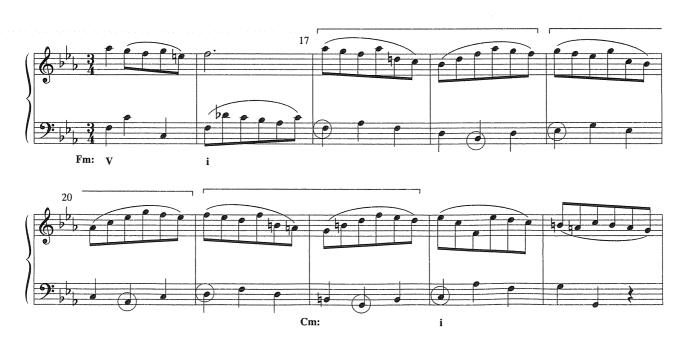
Sequential Modulation

In a **sequential modulation** or tonicization, the sequence is used as a means to change tonal center. This is often done by stating each sequence segment in a different key, as in the case of Bach's Minuet from French Suite no. 3 (anthology, no. 11). The key in mm. 23–24 is F#m. In m. 25 an ascending sequence consisting of two segments first tonicizes Em (the key of iv with respect to the home key of the piece, Bm) in mm. 25–26, and then F#M (the key of V) in mm. 27–28. This tonicized V leads to the return of the tonic key in m. 31. The long-range tonal plan outlined by this sequential passage is thus iv–V–i as key areas, or, in other words, a large authentic cadence at the phrase level, rather than the chord level.

Descending melodic sequences, normally accompanied by a circle-of-5ths harmonic sequence, are also a strong modulating procedure at the formal level. A circle of 5ths can be used to modulate virtually to any key, depending only on where the composer stops the circle. The circle can thus be used to go from one key to another, and moreover it may also tonicize each of the steps in the process. In example 20.14, a six-measure sequence is used to modulate from Fm to Cm (a modulation that Bach could have realized with only a couple of chords had he wanted to do so). Are any other degrees (that is, pitches) tonicized in the process?

🕽 🕽 Example 20.14

J. S. Bach, French Suite no. 2, Minuet, mm. 15–24



E. Grieg, "The Death of Ase," from Peer Gynt, mm. 1-16



Phrase (or Direct) Modulation; Abrupt Modulation

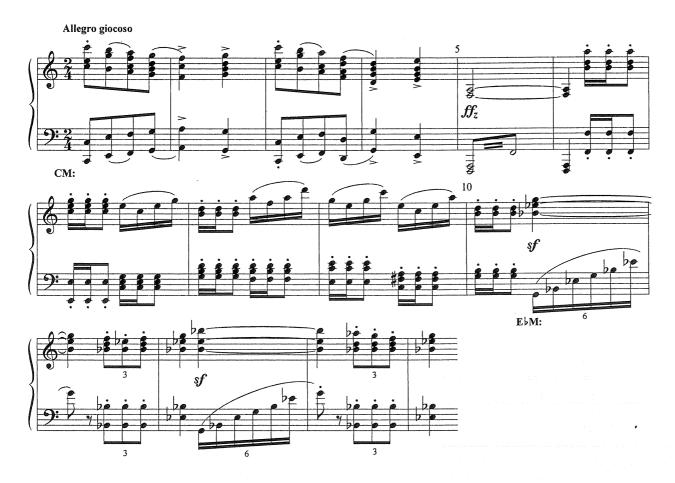
Not all modulations proceed smoothly by means of a pivot chord. In the type of modulation known as **phrase modulation**, a phrase is in a key, and the next phrase is in a different key, which is presented more or less suddenly. In the passage by Grieg that appears in example 20.15, the first period (two phrases, mm. 1–8) is in Bm. The second period, mm. 9–16, is in F‡m, the key of the minor dominant. There is no transition between the keys, but rather the new key is presented suddenly as the new phrase begins in m. 9. This is a phrase modulation. Because in this type of modulation there is no transitional process between the two keys, it is also called **direct modulation**. Refer, for another example, to anthology, no. 32 (Beethoven, Sonata in Fm, op. 2 no. 1, III). The first phrase of the minuet, mm. 1–4, is in Fm. The second phrase (mm. 4–8) restates the same material as the first one, but now in AbM. The new key is introduced by the new phrase, with no previous preparation.

Both of the preceding examples of direct modulation involve closely related keys and parallel phrases. Sometimes, however, the keys are not closely related and neither is the thematic material. Composers may want to introduce a new key in an abrupt way, for tonal surprise or to provide the music with a strong forward trust by means of tonal contrast. Example 20.16 illustrates this type of **abrupt modulation**, in this case from CM to EM, also introducing a new thematic idea along with the new key (m. 10).

Modulating Periods

A modulating period is a period that begins and ends in different keys. This type of period is most often found as the first section in binary forms, which we will study in

J. Brahms, Symphony no. 4, III, mm. 1–14



the next chapter. The tonal function of a modulating period is to introduce and establish the tonic key, and then to move away from it, as part of a long-range formal tonal plan of departure from and return to the tonic key. The usual modulations are to the dominant key in major-mode compositions, and to the relative major in minor-mode pieces, although other modulations are also possible. Modulating periods are often parallel, and the modulation takes place in the second phrase. Such is the case in example 20.17, a period in the minor mode modulating to III. Where exactly does the modulation take place? What type of modulation is it? If it is a pivot chord modulation, identify a possible pivot chord and its double function. Beware that, because the texture is limited to two voices, you may have to imply the complete harmonies.

You will find several examples of modulating periods in the anthology, some of which we have already mentioned in this chapter, such as anthology, no. 32 (Beethoven, Sonata op. 2 no.1) and no. 11 (Bach, Minuet from French Suite no. 3). Anthology, no. 24 (Mozart, Sonata in DM, III, Tema) is a good example of a parallel period modulating to the dominant key. Analyze the modulation, finding and interpreting the pivot chord.

PRACTICAL APPLICATION AND DISCUSSION

Modulation is one of the most essential harmonic processes in Western tonal music. It provides tonal variety necessary in complete compositions, it provides both a harmonic drive and tonal goals for long-range formal designs, and it contributes to creation of a tension between tonal definition and tonal instability, a basic element in formal generation of large movements. You have played many modulations in your life as a performer, and any of the compositions in your repertoire can illustrate modulating processes in one way or another. Find several of these modulations in pieces you perform, and bring them to class as examples. Specifically, try to find the following cases of modulation:

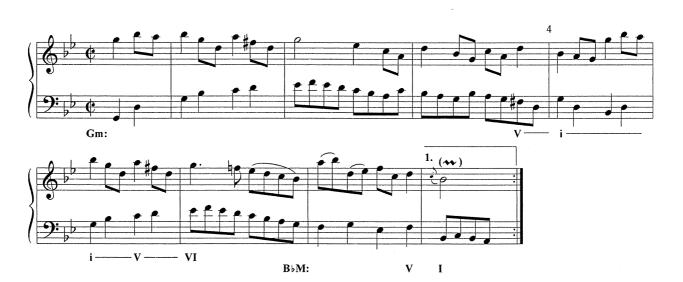
1. A modulation you especially like, perhaps because it leads from one key to another in an imperceptible, smooth way; or because it is very well crafted and perhaps you had always noticed how beautiful and effective the passage was; or because it is very surprising and you had always been struck by the boldness of harmonic motion in that passage; or for whatever other reason you may like it.

- 2. A modulating period. You may find these in the first section of a binary form (a minuet, a sarabande, or some other dance type).
- 3. A modulation from I to V or from i to III in the first movement of a sonata.

After you understand how modulations work, and what their formal function is, does this affect in any way your vision of music as a performer? How? Do modulations help you hear and transmit the principle of musical motion? Think of the tension that a modulatory process creates, and of the sense of arrival and the renewed musical impulse we feel when we reach the new tonic. Does the new tonic come along with new thematic material, further stressing the idea of renewal? How does the process of modulation contribute to the sense of instability and tonal motion in developmental sections? Does the developmental process lead to a return of the tonic key and of the original thematic material, and do we experience a release of tension when that happens?

DExample 20.17

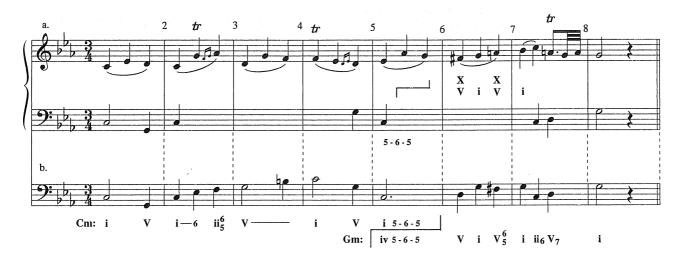
J. S. Bach, English Suite no. 3 in Gm, Gavotte I, mm. 1-8



HARMONIZING MODULATING MELODIES

Modulating melodies often provide sufficient information for a clear harmonization of the modulating passage. Sing the Haydn melody in example 20.18a. You will immediately realize three things: It begins in Cm, it ends in Gm, and m. 6 displays clear signs of the modulation when F# and A4, two pitches from the Gm scale, are introduced. (Note that in minor keys, modulations to the dominant are usually to the *minor* v, instead of V.) You will also notice that the melody appears to have two four-measure units, and that the end of the first unit can easily be harmonized with a V-i in Cm. In other words,

J. Haydn, String Quartet op. 54, no. 2 in CM, II



you have followed the first steps in the process to harmonize modulating melodies, which can be summarized as follows:

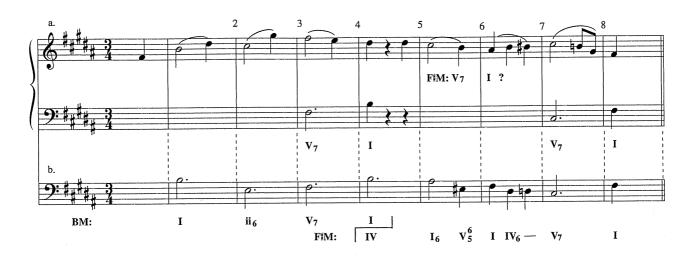
Procedure to harmonize a modulating melody:

- 1. Sing and play through the melody. Identify the opening and closing keys. If they are the same, identify any possible inner fragments in a different key.
- 2. Identification of a new key will ideally be facilitated by some melodic features such as accidentals (perhaps the new LT).
- 3. Identify possible points of articulation that may indicate cadential gestures (in the original or the new key). Write the bass for these cadences.
- 4. Identify the melodic area that clearly indicates the new key, and find a possible place for your pivot chord right before it.
- 5. Harmonize the rest of the melody according to the principles of good functional harmonization that you are familiar with.

In our example, after we have identified the opening and closing keys, the accidentals that indicate Gm, and the cadential points, we can write the bass for the cadences in mm. 4–5 (on C) and 7–8 (on G). Next, we will harmonize the modulation. In m. 6, already in Gm, the F \sharp -G-A can be harmonized with some kind of V-i-V progression, and in m. 5 before it, a C in the bass can support a 5–6–5 figure. In Cm, m. 5 would then be i_{5-6-5} . Because the next measure is already in Gm, the pivot chord will need to be in m. 5. So the i_{5-6-5} in Cm becomes iv_{5-6-5} in Gm. All of this process is illustrated by the notes in example 20.18a. All that is left is to complete the harmonization of the melody. A possible complete harmonization, using only bass line and Roman numerals, is shown in example 20.18b.

At times, *melodies do not indicate modulations clearly*, and then we need to use a bit more harmonic imagination to harmonize them. Sing or play the melody in example 20.19a. Our immediate reactions might be: It begins in BM, it cadences on B in m. 4, and the last

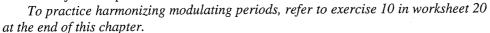
J. Haydn, String Quartet op. 64, no. 2 in Bm, Trio



two measures indicate a cadence in $F^{\sharp}M$, so we must have modulated to the dominant key. We write down all of this information, as in example 20.19b. Knowing that it modulates to $F^{\sharp}M$, let's go back to mm. 5–6, which in principle could simply be harmonized in BM. Can they also be heard in $F^{\sharp}M$? Try it: Harmonize m. 5, beat 3, as a V_7 in F^{\sharp} , and resolve it to I in m. 6. It works. Then we need a pivot chord. You could use the first chord in m. 5, as V in BM and I in F^{\sharp} . An even better pivot could be the BM chord in m. 4. A complete harmonization appears in example 20.19b. Notice that the B^{\sharp} in m. 6 is interpreted as a chromatic PT, accompanied by another chromatic PT in the opposite direction in the bass.

EXERCISES

To practice harmonizing a modulating chorale melody, refer to exercise 8 in worksheet 20 at the end of this chapter.



To practice analysis of musical fragments including modulations, refer to exercise 1 in worksheet 20 at the end of this chapter.



FOR FURTHER STUDY

For additional chapter 20 materials, refer to the Harmony in Context Web page at www.mhhe.com/roigfrancoli2e.

ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 20 in the workbook.

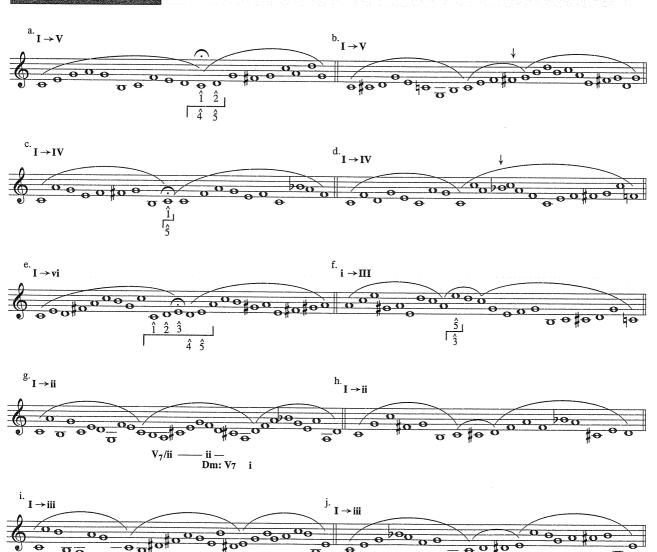
PITCH PATTERNS

Sing the melodic pitch patterns in example 20.20, and as you sing listen to the modulation in each of the patterns, paying special attention to the "pivot pitch" or pitches, or to the chromatic motion that effects the modulation. Practice improvising similar pitch patterns modulating to different keys.

🖒 Example 20.20

 V_7/iii

iii — Em: V---- i



Terms for Review

Modulation Change of mode Closely related keys Distantly related keys Pivot chord modulation Diatonic pivot chord Diatonic pivot chord modulation Chromatic pivot chord Chromatic modulation Sequential modulation Phrase (direct) modulation Abrupt modulation Modulating periods



Worksheet 20

EXERCISE 1 Analysis. Study and analyze the modulations in exercises 1.1 to 10, and follow the steps listed below for each of them.

- 1. Identify (and write in the space provided for each exercise) the keys involved in the modulation.
- 2. Identify (and write in the space provided for each exercise) the modulation procedure from among the following:
 - a) Diatonic pivot chord
 - b) Chromatic pivot chord
 - c) Chromatic modulation
 - d) Phrase modulation
 - e) Abrupt modulation
 - f) Sequential modulation or tonicizations
- 3. If it is a pivot chord modulation, identify the exact pivot or pivots, and label it or them on the score with the pivot chord bracket notation, indicating the function of the chord in both keys.
- 4. For a chromatic modulation, circle the exact passage where chromatic voice leading is used to modulate.
- 5. For phrase, abrupt, or sequential modulations, mark the exact spot or spots where modulation occurs.

Examples for Analysis:

- 1. Example 20.21.
- 2. Anthology, no. 32, Beethoven, Sonata in Fm, op. 2, no. 1, Trio, mm. 41–50.
- 3. Anthology, no. 32, Beethoven, Sonata in Fm, op. 2, no. 1, Trio, mm. 51–66.
- 4. Example 20.22.

J. Haydn, String Quartet op. 77, no. 1, Minuet, mm. 1-12



C. Schumann, Trio in Gm, I, mm. 22-32



- 5. Anthology, no. 11, Bach, French Suite no. 3, Minuet, mm. 17–24.
- 6. Anthology, no. 34, Beethoven, Sonata in Cm, op. 13, III, mm. 16-25.

- 7. Anthology, no. 31, Paradis, Sicilienne, mm. 4–10.
- 8. Anthology, no. 20, Haydn, Piano Sonata in DM, II, mm. 1–12.
- 9. Example 20.23.
- 10. Anthology, no. 47, Schumann, "Ich grolle nicht," mm. 12–16.

(20.23 Example 20.23

F. Schubert, Sonata in BhM, D. 960, I, mm. 113-119





EXERCISE 2 Make a list of all five keys closely related to each of the following keys.

- 1. DM:
- 2. BbM:
- 3. F#m:
- 4. Fm:
- 5. C#m:
- 6. D♭M:

EXERCISE 3 The following statements refer to diatonic pivot chord relationships. Fill in the blank in each statement.

- 1. I in DM becomes _____ in AM.
- 2. _____ in Gm becomes IV in B\M.
- 3. I in _____ becomes V in Alm.
- 4. iv in Em becomes ii in _____.

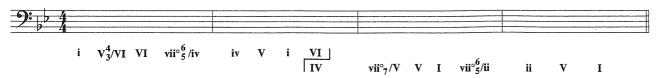
EXERCISE 4 The following two progressions represent modulations by diatonic pivot chord.

Progression a. Provide RNs for the given bass, accounting for the modulation and indicating the pivot chord with the usual bracket. Use secondary dominants or diminished seventh chords where possible.



Progression b. Write a bass line for the given RNs. Be careful to modulate to the right key.

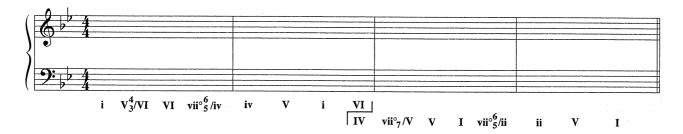
b.



EXERCISE 5 The following progression represents a chromatic modulation. Provide RNs for the given bass, accounting for the modulation and indicating the pivot chord with the usual bracket. Use secondary dominants or diminished seventh chords where possible.



EXERCISE 6 After you are sure that your bass line for exercise 4b is correct, realize the progression in four voices on the staff below.



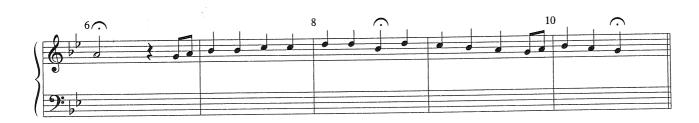
EXERCISE 7 Write the following modulations (bass and RNs). Choose an appropriate pivot chord for each of them and indicate it with the customary bracket.

- a. A modulation from AM to EM. Use the following chords somewhere in your progression, along with any other chords you want: a series of successive secondary dominants, viio⁶/vi, and viio⁶/vii.
- b. A modulation from Dm to FM. Use the following chords somewhere in your progression: $vii_2^{0.6}/V$, $vii_3^{0.6}/IV$, and an irregular resolution of V_5^6 .
- c. A chromatic modulation from B\(\text{M} \) to Dm, using secondary chords in various inversions in the process of establishing both keys.

a. 9 :### 3		
•		
b.		
9: 4		
c.		

EXERCISE 8 Harmonize the following chorale ("Warum betrübst du dich, mein Herz") with a bass line and RNs, accounting for possible modulations. After you are sure that your harmonization works, add the two inner voices.





EXERCISE 9 Write simple keyboard accompaniments for the following modulating periods by Haydn. Provide RNs for your harmonizations and indicate your pivot chord in each case.











Chapter 21

Small Forms: Binary and Ternary; Variation Forms

In chapters 2, 10, and 11, we studied the elements of form. We defined *form* as the tonal, rhythmic, and thematic relationships among musical units or sections, and we saw that *cadences* are a harmonic element of formal articulation. The basic formal units are the *motive*, *phrase segment*, *phrase*, and *period*. We learned to use *form diagrams*, which we called *bubble diagrams*, to express form graphically. Phrase segment relationships in these diagrams are indicated by lowercase letters with subscripts, whereas capital letters indicate thematic relationships between larger formal units.

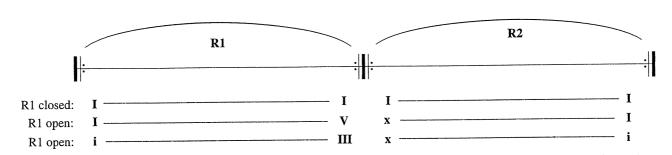
In this chapter we will study how all of these formal elements come together to shape independent, complete formal units. We will first focus on the so-called small formal designs, binary and ternary, and we will then study variation forms.

We should emphasize that, because composers have used musical design and formal growth in free and creative ways, the study of form is fraught with difficulties. Even within more or less preestablished formal designs, the possibilities of variations, transformations, or exceptions are multiple. As William Rothstein states after defining ternary form, "however, as so often with matters of form, there are endless complications" (*Phrase Rhythm in Tonal Music*, p. 108). Form being indeed an ambiguous matter, in textbooks dealing with this topic there is no consistency or agreement on the exact terminology and definitions applied to formal types. Having clarified this, we will now attempt to provide as clear a discussion as possible.

THE BINARY PRINCIPLE

Binary pieces are structured in two parts, which we will call **reprises**. Binary is one of the most common formal designs in the baroque and Classical periods. In the baroque, the dance types that usually constitute a **suite** (such as **allemande**, **courante**, **minuet**, **bourrée**, **gavotte**, **sarabande**, **gigue**, etc.) were normally in binary form. In the Classical period, the most frequently found case of a piece in binary form is the minuet (and the trio) in sonatas or string quartets. You are quite likely to have performed numerous binary pieces in your musical life.





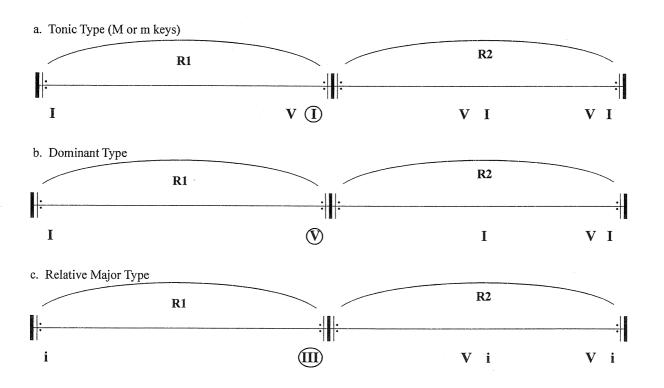
Each reprise in a binary design (which we will refer to as reprise 1 and reprise 2, abbreviated as R1 and R2) is usually, but not always, repeated. A reprise is **closed**, or harmonically complete, if it ends on the tonic of the main key, and it is **open**, or harmonically incomplete, if it does not. In binary, reprise 1 begins in the tonic key, and it may end on the tonic (closed), on a half cadence (HC) (open), or in a different key (open). Reprise 2 may begin and end in the tonic, or, more often, it begins on a key or harmony other than the tonic and ends on the tonic. Example 21.1 summarizes all these possibilities for the binary principle, with the "harmony other than the tonic" at the beginning of reprise 2 expressed by means of an "x."

BINARY TONAL TYPES

Because binary pieces, like most tonal pieces, begin and end on the tonic, tonal types are mostly determined by the harmony that closes reprise 1. We will now study the binary tonal types, which are represented graphically in example 21.2. The harmony that closes reprise 1 in each of these types is circled in this example.

- 1. The Binary Tonic Type. Refer to anthology, no. 6 (Minuet from Notebook for Anna Magdalena Bach). Reprise 1 closes with a perfect authentic cadence (PAC) in the tonic key. This is a binary piece of the tonic type (also called "sectional binary" by some authors). As in our minuet, the beginning of reprise 1 in this tonal type is usually a prolongation of the tonic, and the dominant is usually reached toward the middle of reprise 2, leading to a return of the tonic (see the cadence in m. 24 in the minuet, leading to the return of I in m. 25). This tonal type is shown in example 21.2a.
- 2. The Binary Dominant Type. The Haydn minuet in CM in anthology, no. 19 illustrates another binary tonal type, the **dominant type** (also called "continuous binary" in some texts). Reprise 1 ends on the dominant, in this case on a HC on V, without a modulation. A similar example of the same tonal type appears in anthology, no. 24 (Mozart, Sonata in DM, Tema), only in this case reprise 1 is a modulating period; that is, it ends with a PAC in the key of the dominant. The modulating

Binary Tonal Types



dominant type does not differ, essentially, from the nonmodulating type. In both cases, reprise 1 is open-ended, and in both cases the beginning of reprise 2 usually prolongs the V which closes reprise 1. This prolongation is extended all the way to the cadence on V toward the middle of reprise 2, before the tonic returns. This tonal type is represented in example 21.2b.

3. The Binary Relative-Major Type. In minor keys, the "dominant type" usually becomes the relative major type, that is, the modulation at the end of reprise 1 leads to III rather than V. An example of this type appears in example 21.10. At the end of reprise 1 we have reached the relative-major key, which is prolonged into reprise 2. The return of the tonic key in m. 19 (confirmed in m. 27) is preceded by an arrival on the dominant in m. 14, reiterated in m. 18. In other words, as in the dominant type, in the relative-major type we also reach V toward the middle of reprise 2, before moving back to the tonic. Both the V type and the III type are based on the familiar tonal paradigm, "tonic established/departure from tonic/return to tonic." See the formal diagram for the relative-major type in example 21.2c.

BINARY FORMAL DESIGNS

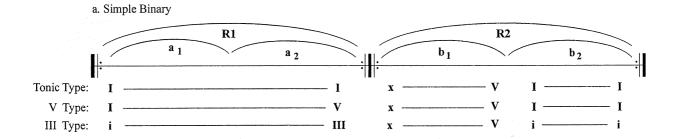
Different binary formal designs result from various possible thematic relationships between both reprises. In general, however, some formal traits are common to all binary designs:

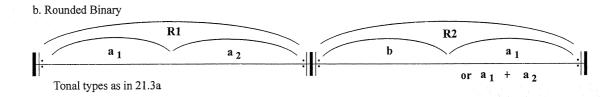
- 1. Reprise 2 is often longer (sometimes as much as twice as long or more) than reprise 1.
- 2. Reprise 1 is usually divided into two phrases (constituting a period), and reprise 2 is itself divided into two sections, each of which can have several phrases. This sectional division is best expressed by the diagram in example 21.3a. We will use the abbreviations R1 and R2 to refer to reprise 1 and reprise 2, respectively, regardless of their thematic content. Lowercase letters will designate thematic relationship at the phrase level.

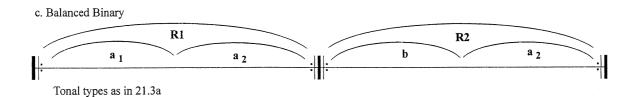
In our sample paradigms in example 21.3, we will assume that the two phrases in R1 are related thematically $(a_1 \text{ and } a_2)$, whereas the first phrase in R2 is contrasting (b),



Binary Formal Designs







J. Haydn, Piano Sonata in AM, Hob. XVI:5, II, Minuet

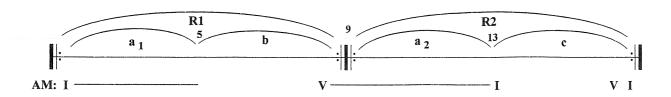


although various other thematic relationships are certainly possible. In general, the first phrase of R2 is the least stable harmonically, and it may have a developmental character both harmonically and thematically. The different binary formal designs are determined by the existence or nonexistence of a *return* of the main thematic material from reprise 1 in the tonic key toward the end of reprise 2, as we will discuss below.

Simple Binary

In the **simple binary** design, there is no return of the main thematic material from reprise 1, at the original tonic level, in the second section of reprise 2. Study example 21.4. This is a brief binary piece, with each reprise clearly delimited by repeat signs. The tonal and thematic structure of this minuet is summarized by the graph in example 21.5. Because there is no return of thematic material from reprise 1 in the second section of reprise 2 (in m. 13, where the tonic returns), this is a simple binary design. Otherwise,

Example 21.5



we can observe that the two phrases in R1 are contrasting (designated as a_1 and b). In R2, the first phrase is a varied statement of a_1 , but now at the dominant level, hence the designation a_2 , whereas the second phrase is based on new, contrasting material, labeled c in the diagram. From a tonal point of view, R1 moves from I to V. An extension of V in R2 leads to the return of I in m. 13. The piece is, then, in simple binary dominant-type form.

Analyze and discuss in class the minuet from the *Notebook for Anna Magdalena Bach* in anthology, no. 6. Review its tonal type (which we already mentioned), analyze the cadences and possible key areas, determine sections and their motivic relationships, and label them with appropriate letters. Then provide a complete formal graph following the model in example 21.5.

Rounded Binary

The formal design known as **rounded binary** features a return of the initial material from reprise 1 in the second section of reprise 2 (consult the formal diagram in example 21.3b). The return, in the tonic key and at the same tonal level as the original statement, can be of two types. In the first type, the opening section of R1 (a_1 in our diagram) returns as the closing section of R2. In the second type, all of R1 ($a_1 + a_2$) returns as the final section of R2. Let us study two examples to clarify these two formal designs.

The binary piece in example 21.6a is of the dominant type. R1 is an eight-measure modulating period, divided into two phrases (mm. 1–4 and 5–8, featuring an a–b contrasting thematic relationship). R2 begins with a four-measure phrase (thematically contrasting or c) that prolongs the dominant key area established at the end of R1 and confirms it by means of a new cadence on the dominant in m. 12. After the cadence on V in m. 12, we can expect a return of the tonic key for the second section of R2. What we get is not only the return of DM, but also the return of the opening phrase, a. After three measures of "return" (mm. 13–15), the phrase is extended sequentially and finally closes with a PAC in DM. This piece is in rounded binary form because the opening section of R1 returns as the final section of R2. Study the formal diagram in example 21.6b: compare it with the piece and understand the relationship between both.

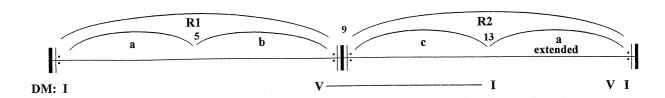
Refer now to example 21.7. This binary trio has a similar tonal structure to the one we have just discussed. It begins with an eight-measure reprise 1 modulating to the dominant and is also divided into two four-measure phrases with an a-b thematic structure. The first phrase of R2 prolongs the dominant key area for eight measures by means of a contrasting four-measure phrase repeated twice (mm. 9–12 and 13–16), leading to the expected return of the tonic key in the second section of R2. The return brings not only the tonic key (m. 17), but also the complete R1, including both the a and b phrases. The only difference between this return of R1 and the original R1 is that, in the original, the second phrase (mm. 5–8) modulated to V, whereas in the return the equivalent phrase (mm. 21–24) stays in the tonic key to allow for the final PAC on I.

¹ Some authors emphasize the ternary (that is, three-part) structure of this type of design, rather than its binary structure. From that point of view, the first reprise is an "exposition," the first section of R2 is a "contrasting middle," and the second section of R2 a "recapitulation." Although in this book we do not adopt this view, the interested student may find it articulated in detail in Caplin, *Classical Form*, pp. 71–86.

J. Haydn, Piano Sonata in DM, Hob. XVI:4, Trio



∴ Example 21.6b



🐊 Example 21.7

L. v. Beethoven, String Quartet op. 18, no. 5, Trio



(Continued)



To practice your understanding of rounded binary, analyze the following pieces from the anthology: no. 24 (Mozart, Sonata in DM, Tema) and no. 19 (Haydn, Minuet and Trio in CM). In the latter example, analyze both the Minuet and the Trio as separate examples of rounded binary. For each of these, discuss the tonal type (Is R1 a modulating period?), cadences and key areas, divisions into phrases, and relationships among phrases. What is the extent of the return? Does the complete R1 return, or only its first phrase? Finally, realize a complete formal diagram for each of these pieces.

Balanced Binary

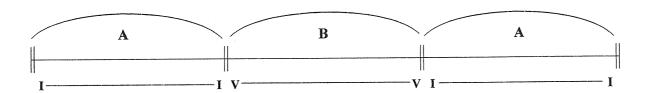
In this formal design, what returns in the second section of R2 is neither the opening phrase from R1 nor the complete R1, but rather only the final phrase of R1, as expressed in the formal diagram in example 21.3c. A well-known example of the tonic-type balanced binary appears in example 21.8. R1 is an eight-measure parallel period, including a tonicized HC in m. 4, and a PAC on I in m. 8. These two cadences close the two phrases of R1, respectively, which form a parallel period (a_1-a_2) . R2 opens with a contrasting b phrase that includes tonicizations of vi and V. (What chords are used to tonicize these degrees in mm. 9 and 11?) Finally, the closing phrase of R2 (mm. 13–16) turns out to be an almost literal return of a_2 , the phrase that previously closed R1. The form is thus "balanced" by this ending phrase common to both R1 and R2, hence the name of this formal design. Notice that in a balanced binary of the dominant or relative major tonal types, in which the final phrase of R1 ends on V or III, the return of this second phrase of R1 at the end of R2 will lead to a cadence in the tonic key, rather than on V or III.

W. A. Mozart, Eine kleine Nachtmusik, K. 525, III (Menuetto)



THE TERNARY PRINCIPLE

A piece in **ternary form** is any piece made up of three closed, independent parts. In principle, the formal and harmonic possibilities for this definition are many. The three parts may be related by a variety of formal designs, such as A-A-B, A-B-A, A-B-B, or A-B-C. We will focus here, however, on the most standard tonal and formal design



of ternary. In this design, summarized as A–B–A, the initial section, A, returns after a contrasting section, B. Moreover, the A sections are tonally closed, and the B section, which may be open or closed, is often (but not necessarily) in the dominant or relative major key. Example 21.9 shows a standard tonal and formal paradigm for this ternary principle.

Turn now to anthology, no. 46 (Schumann, Kinder Sonate no. 1), a splendid example of ternary composition. Because this piece contains many of the harmonic and formal concepts that you already know well by now, it is worth studying and discussing it in some detail. We will do so in the following guided analysis. First listen through it, and you will notice that the opening section, mm. 1–14, comes back at m. 35 in its entirety, with only a slight alteration toward the end to provide a brief cadential extension or *coda* (mm. 48–51). It is also immediately apparent that the first and last sections, the A sections, begin and end in GM, and that the middle B section begins and ends in Em. All three sections are then closed, and the middle section presents a contrasting tonal area, in the relative minor. We have thus identified our normative, standard ternary principle.

Next we can focus on each of the main sections separately. Identify all the phrases in the A section. Then continue reading. You will probably have identified a first four-measure phrase, with two clear phrase members. This initial phrase establishes the tonic key and presents the main thematic material of the section. Beginning at m. 5, we start moving away from the tonic. Where are we moving to tonally? What is the first indication of this modulation? Where are we sure that we have modulated? (Do not keep reading until you have answered these questions!) The move is to the dominant key, announced by the C# in m. 5, confirmed by the V–I progressions in DM in mm. 7–8, and further confirmed by the cadence in DM in m. 10. Now go back to m. 5. Here we are still in GM, but the next measure is in DM. Which chord is the pivot chord? And now go again to m. 10, where the cadence on DM takes place. In m. 11, the opening material comes back in GM. How did we modulate so fast from DM in m. 10 to GM in m. 11?

Now let's look at the B section (mm. 15–34). There is no question that it functions as a contrasting section, not only tonally, but also in several other ways. So let's ask the question: What changes between the A and the B sections? On the other hand, why do we feel that the unity of the piece is preserved? What is similar between the two sections? Answer these questions yourself. For contrast, discuss such elements as texture, rhythm, articulation, character, and type of melody. For unity and similarity,

you may want to look at motivic content, and especially at the role of the perfect 4th as a motivic and melodic interval. Is the 4th an important interval in both the A and B sections? Moreover, look at the ascending eight-note motive in m. 2. Is it replicated in the B section?

The most interesting measures in the B section, from a harmonic point of view, are mm. 19–22. How are mm. 19–20 related to 21–22 melodically and harmonically? What are the secondary key areas in mm. 19–20 and 21–22, respectively? On the other hand, mm. 18–22 outline a circle-of-5ths progression. Identify each of the members of the circle (which is not complete).

Now that you have analyzed this interesting piece, listen to it again or play through it, and try to hear all the things you have discovered about it. Does your knowledge of form, tonal areas, tonal direction, and motivic and harmonic details make the listening or playing more enjoyable?

Compound Topary

In the Classical period, one of the inner movements of sonatas and symphonies was often a *minuet* with its accompanying *trio*, after which you may have seen the familiar indication *Menuetto da capo*. The complete movement was, then, the minuet, the trio, and the complete minuet again. In this type of A–B–A design, which we call **compound ternary**, each of the three sections is a closed, independent piece in itself and, moreover, each of the sections is in one of the binary forms.

Refer to anthology, no. 19 (Haydn, Minuet from Divertimento in CM). The minuet is a V-type rounded binary in which all of reprise 1 returns in the second section of reprise 2, and the trio is a tonic-type rounded binary, also with the complete R1 returning as the second section of R2. Now listen to the complete movement, including the *Menuet da capo* as a single formal unit. You will, of course, recognize the A-B-A design of ternary, but because each of the sections is an independent binary piece, this is a compound ternary. Can you think of any compound ternary in your performance repertoire? If not, find (and listen to) an example of this formal design in some symphony by Haydn or Mozart.

The Da Capo Aria

The major three vocal genres of the baroque period were the opera, the cantata, and the oratorio. Although the function of each of these genres was very different, by the late seventeenth century all three were made up of the same kind of compositional types: *choruses, recitatives,* and *arias*.

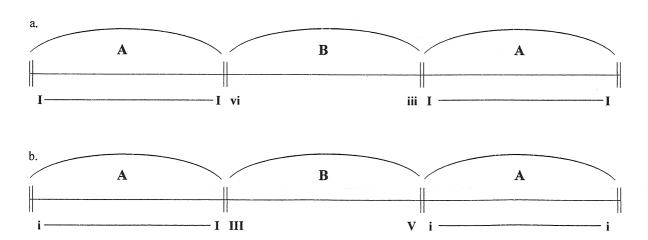
Although several formal designs are found in baroque arias, perhaps the most frequent one is a ternary design known as *da capo* aria. This formal design fulfills the characteristics that we have studied for ternary designs: it is in three parts, the middle part is usually contrasting tonally and thematically, and the third part is a literal return of the first part. Because the return is literal, composers normally avoided copying it again and simply wrote the indication *da capo* at the end of the B section. At the end of the A section you are likely to find the indication *Fine*, telling the performer that this is the real end of the composition. *Da capo* arias often include passages, especially in the

A section, in which the orchestra plays alone. These passages are normally statements of the main thematic material and are called *ritornellos*.

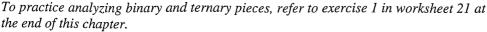
An example of a *da capo* aria is provided in anthology, no. 16 (Handel, "Lascia ch'io pianga," from *Rinaldo*). First discuss the A section. Is it closed? What is its formal and tonal design? Does it include an orchestral *ritornello*? Now look at the B section. It is shorter, accompanied only by the continuo, and, in spite of its shorter length, it is more chromatic than the A section. This B section also shows a typical characteristic of B sections in *da capo* arias: They usually begin and end in different keys, rather than featuring a closed tonal motion. After the major-mode A section in our example, the B section begins in the relative minor key, vi, and ends in the key of iii. This is a frequent tonal plan for *da capo* arias in major mode. In minor-mode arias, the B section often begins in the relative major and ends in the dominant key. These tonal designs are summarized in example 21.10.

It is interesting to note that, in a way, binary is more complex than ternary, mostly because of the various possibilities of tonal motion within the reprises and because of the several formal designs within the general binary paradigm. We should also point out that both binary and ternary generate larger, more complex forms, which we will study later in the book. Sonata form, an outgrowth of binary form, is a large binary design in which the first section of R2 becomes the development and the second section of R2 becomes a complete recapitulation of the complete R1, but now without the modulation away from the tonic key. The rondo form, on the other hand, is also an outgrowth of ternary. Ternary has three parts, A–B–A. If you continue the pattern of alternating a return (the refrain) with a contrasting section, you will come up with such typical rondo schemes as A–B–A–C–A or A–B–A–C–A–D–A. The formal principles we have learned in this chapter, then, set the stage for some of the major formal designs in the music literature.

Example 21.10



EXERCISES



For an assignment of an analytical paper on a binary or ternary piece, refer to chapter 21 in the workbook.

For melody harmonizations and composition exercises, refer to chapter 21 in the workbook.



VARIATION FORMS

The variation principle is a basic musical device often used in any type of composition. Composers frequently decide to repeat musical statements, and sometimes they do so literally (in what we call a **literal counterstatement**). At other times, however, the repetition is not literal, but varied (a **varied counterstatement**): The previous material may be altered or embellished in a number of ways, including addition of notes or figuration, simplification, rhythmic alteration, and so on. Examples of varied counterstatements appear, for instance, in anthology, no. 35 (Beethoven, Piano Sonata no. 21 in CM, *Waldstein*, I), in the context of the first movement of a sonata. Compare the initial theme (mm. 1–4) with its varied repetition in mm. 14–17. What did Beethoven change in the counterstatement? Now compare the statement of the new theme in EM that appears in mm. 35–42 with the immediate varied counterstatement in mm. 43–49. The difference here is quite considerable: What stays the same, and what is varied in the counterstatement?

We will now study the variation principle as a form-building process applied to complete movements or compositions. The types of compositions totally built on the variation principle are usually called "variations" or "theme and variations." The variations as a genre allow for great freedom on the composer's part. In their most usual compositional type, variations begin with the statement of a theme, a phrase, or a short piece (often in binary or ternary form) that is then restated in varied forms as many times as the composer wants.

Types of Variations

The first question we ask for each variation should be, as above: What stays the same, and what is varied? The following are some of the elements we can examine for this purpose: key, mode, form, length, melody (both pitch and rhythm), tonal structure, precise harmonic sequence, bass, tempo, texture. Some types of variations result from standard procedures that recur in variation sets by different composers. Some of these specific variation types are listed below.

- 1. **Ornamental variation:** The melody is elaborated (diminuted) by means of added notes.
- 2. **Simplifying variation:** The melody is simplified (reduced).
- 3. **Figural variation:** Built on a particular motive or figure (for instance, a triplet, a dotted figure, or some other repeated rhythmic motive).

- 4. **Contrapuntal variation:** Uses some kind of contrapuntal technique, such as imitation, canon, or free counterpoint.
- 5. **Characteristic variation:** In the style of some characteristic compositional type such as march, dance form, adagio, or finale.
- 6. **Double variation:** The first and second statements of each reprise in a binary form are written out, and each constitutes a different variation (instead of the more frequent repetition, by the repeat signs, of the same material).

Shape and Form of Complete Sets

Sets of variations constitute musical wholes, and composers design their musical shape and form thinking of the complete movement as a unit. For long-range design of shape, then, we must examine grouping, contrast, and tempi. Is there a rhythmic *crescendo* that groups several variations? Is there a pattern of increasing complexity? Is one of the central variations an *adagio*, functioning as a "slow movement" within the movement? Is the last variation a characteristic *finale*, in fast tempo and with brilliant figurations? Is there a long-range tonal design (such as, perhaps, M—m—M) that groups several variations? Does the grouping reveal any kind of long-range formal design (say, some kind of ternary)?

CONTINUOUS VARIATIONS

If we take into consideration the formal type of each variation and the connection between adjacent variations, there are two types of variation forms: continuous and sectional. In **continuous variations** the theme and each variation are usually short (one or two phrases) and there is no interruption between variations. In **sectional variations**, on the other hand, the theme and each variation are usually self-sufficient formal units (such as binary or rounded binary pieces), including a clear cadential pause at the end of the theme and each variation.

The most common type of continuous variation is built on a **bass ostinato** or **ground bass** (a melodic fragment repeated over and over again, and often associated with a harmonic progression). Study, for instance, Purcell's "Ah, Belinda," from *Dido and Aeneas* (anthology, no. 3). You will see that the complete aria is composed on a four-measure repeated bass phrase. Having identified this, you can ask yourself the following questions regarding this (or any other) bass-ostinato piece:

- 1. Is the bass phrase repeated unaltered every time, or is it ornamented?
- 2. Is it transposed in some section? To what tonal level or key area?
- 3. Is the bass phrase harmonized with the same progression every time it appears, or does the harmony change?
- 4. How is the melody phrasing related to the bass phrasing? Do they correspond? Or do they overlap? Overlap of phrases (which takes place when beginnings and endings of phrases in different voices do not correspond) is a frequent means to achieve continuity and a sense of continuous flow in this type of variation. Is this the case in our example?

- 5. What is the long-range form or shape of the complete piece? In Purcell's example, factors to consider are first, the repeat signs marking off a section at the beginning, then, the motivic character of the melody associated with the words "Peace and I...." Do these words, and the motive that goes with them, return? Another factor to consider is the statements of the bass phrase in a secondary key area. How does this key area fit into the formal scheme created by the statement and return of the words "Peace and I..."?
- 6. What kind of contrapuntal device do you recognize, in the "Peace and I..." passages, between melody and bass? How does it contribute to the sense of phrase overlap? How does this overlap (the phrases "do not go together") depict what the words are expressing?
- 7. If you sing or play the vocal line, you will notice that, other than the "Peace and I..." fragments, the melody grows quite freely, with hardly any motivic references or repetitions (in contrast to the strict bass ostinato). This type of freely growing melody is characteristic of the baroque period and results from the technique known in German as *Fortspinnung*, or "spinning out."

Some Characteristic Ground-Bass Types

Continuous variations are often based on characteristic bass types such as the chaconne and folia. Characteristic bass formulas became popular in the Renaissance, both as grounds on which to improvise or as bass phrases on which to write variations. Two bass types widely used in the sixteenth century are the *folia* and the *romanesca*, shown in examples 21.11a and b. As with any ground bass, these bass formulas are usually associated with standard harmonic progression. Refer to example 14.11c, where you can review the progressions commonly used to harmonize the *romanesca* and *folia* basses, respectively.

The **chaconne** bass, on the other hand, is more typical of the baroque period, and it appears in various forms. The most common chaconne bass, however, is the **descending tetrachord** $\hat{1}$ – $\hat{7}$ – $\hat{6}$ – $\hat{5}$ (or $\hat{1}$ – $\hat{7}$ – $\hat{6}$ – $\hat{5}$ in minor), as shown in examples 21.11c and e (a *tetrachord* is a collection of four pitches, in this case outlining a descending P4). A chromatic elaboration of the descending tetrachord (of the type found, for instance, in "Dido's Lament," from Purcell's opera *Dido and Aeneas*) appears in example 21.11d. Because the descending tetrachord bass, in both its diatonic and chromatic forms, was often used in baroque operas as the basic structure for songs of sadness, loss, and mourning, it is often referred to as the **lament bass.** For examples of lament bass in popular music, listen to Percy Mayfield's song "Hit the Road, Jack" (as performed by Ray Charles) and Led Zeppelin's "Babe, I'm Gonna Leave You."

The term **passacaglia** also denotes a piece in continuous variation style on a ground bass, but composers have used this term to refer to a variety of basses. Sometimes passacaglia simply means the same as chaconne; that is, a piece titled *passacaglia* may be built on the descending tetrachord bass. At other times, a passacaglia is built on an original bass phrase, as in the case of the well-known Passacaglia in Cm by J. S. Bach (example 21.11e).



To illustrate the type of ground-bass theme on which baroque composers built sets of *continuo* variations, three of the most famous among them appear in example 21.12. Corelli's Sonata "La Follia" is a set of variations on the popular folia bass (example 21.12a). Handel's Chaconne in GM (example 21.12b) is built on the major-mode, diatonic version of the chaconne bass. Bach's "Crucifixus," on the other hand, is built on the minor-mode chromatic version of the same bass. Why did Bach choose to use this bass for this particular section of his Mass? The example includes the first two statements of the bass phrase so that you can appreciate how Bach presents it with contrasting harmonizations from the very outset.

Ground basses are an important compositional technique in popular music. Besides the Ray Charles and Led Zeppelin songs mentioned previously, other popular songs that include ground basses are Del Shannon's "Runaway" (by Charles Westover and Max Crook), The Beatles's "I'll Be Back" (by Lennon and McCartney, from the album *A Hard Day's Night*), and The Lovin' Spoonful's "Summer in the City" (by John Sebastian, Mark Sebastian, and Steve Boone).

Example 21.12a

Archangelo Corelli, Sonata La Follia, op. 5, no. 12, mm. 1–16



الله Example 21.12b

G. F. Handel, Chaconne in GM



Example 21.12c

J. S. Bach, "Crucifixus," from Mass in Bm, mm. 1-9 (vocal parts omitted)



SECTIONAL VARIATIONS

As we saw earlier, in **sectional variations** (the traditional type of "theme and variations"), the theme and each variation are independent formal units, separated by a conclusive cadence and a break in the musical flow. This is the most common type of variation in the Classical and Romantic periods. The first movement of Mozart's Sonata in AM, K. 331, in "theme and variations" form, is reproduced in anthology, no. 27. Listen to the *complete set*, and then discuss the following points in class.

- 1. We have already studied the form of the theme. Review what exact formal design it represents, and note that it is a totally self-contained, conclusive formal unit.
- 2. Is the formal design of the theme preserved intact in each of the variations?
- 3. Variations I–IV can be considered both *ornamental* and *figural* variations. Review the definitions of these terms, and explain how each of these four variations can be seen to represent both types. Can you trace the melodic structure of the original theme in each of the six variations?
- 4. In variations I and II, Mozart was not content with simply writing the complete first reprise using the same variation material (the same figuration, texture, etc.). Compare phrase 1 and phrase 2 in each of these two opening periods, and explain how Mozart varied the second phrase with respect to the first one.
- 5. The theme and variations I–IV can be heard as a formal group. Why? What is the character and function of variation III within this group? Of variation IV?

- 6. Considering their character within the complete set, variations V and VI are *characteristic variations*. What "genres" do they represent? Could variation V itself be an independent movement within a sonata? How about variation VI? What is the formal function of the added mm. 18–26 in this last variation?
- 7. Provide some kind of a diagram showing the overall grouping and formal design for the complete movement.

EXERCISES

To practice analysis of variations, refer to exercise 2 in worksheet 21 at the end of this chapter.



FOR FURTHER STUDY

For additional analysis using materials studied in this chapter, refer to the *Harmony in Context* Web page at www.mhhe.com/roigfrancoli2e.

ASSIGNMENT

For analytical and written assignments based on the materials learned in this and previous chapters, refer to chapter 21 in the workbook.

Terms for Review

Binary Reprise

Suite: allemande, courante, sarabande, gigue, bourrée, gavotte, minuet-trio

Closed unit Open unit

Binary tonal types: I type, V type, III type

Simple binary Rounded binary Balanced binary

Ternary

Compound ternary *Da capo* aria *Ritornello*Variation forms

Literal or varied counterstatement

Ornamental variation

Simplifying variation

Figural variation Contrapuntal variation

Characteristic variation

Double variation

Shape and form of complete sets

Continuous variations Sectional variations

Bass ostinato Ground bass Fortspinnung Folia

Folia
Romanesca
Chaconne

Descending tetrachord

Lament bass Passacaglia



Worksheet 21

EXERCISE 1 Analysis. For each of the pieces to be analyzed, determine and discuss the formal and tonal types, the key areas in the complete piece, and construct a bubble diagram using the given line. The diagram should show sections (labeled with letters) and tonal motion.

In essence, the basic questions about this chapter's formal designs are as follows:

- 1. Binary or ternary?
- 2. If binary, does it feature a return in the tonic key?
 - a) No return: Simple binary.
 - b) Return:
 - 1) Of all of R1: rounded binary.
 - 2) Of the beginning of R1: rounded binary.
 - 3) Of the end of R1: balanced binary.

Examples for Analysis:

- 1. Anthology, no. 11, Bach, French Suite no. 3, Minuet.
 - a) Form and formal design:

b)	Key areas:		
c)	Bubble diagram:		

2. Anthology, no. 32, Beethoven, Sonata in Fm, op. 2, no. 1.

Menuetto

- a) Form and formal design:
- b) Key areas:
- c) Bubble diagram:

Trio

- a) Form and formal design:
- b) Key areas:
- c) Bubble diagram:
- 3. Example 21.13.
 - a) Form and formal design:
 - b) Key areas:
 - c) Bubble diagram:

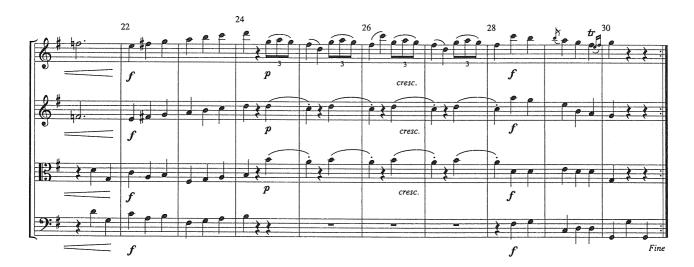
Example 21.13

J. Haydn, String Quartet no. 21, op. 9, no. 3, Π



Example 21.13 (Continued)





- 4. Example 21.14.
 - a) Form and formal design:
 - b) Key areas:

c) Bubble diagram:

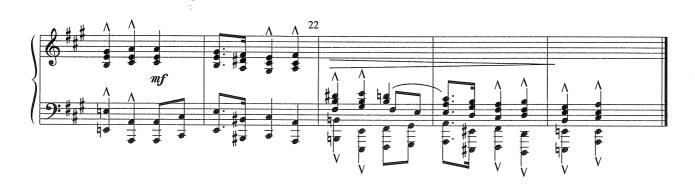
ング Example 21.14

R. Schumann, "An Important Event," from *Scenes from Childhood*, op. 15, no. 6



(Continued)





5. Anthology, no. 32, Beethoven, Sonata op. 2, no. 1.

Menuetto and Trio (Complete Movement)

- a) Form and formal design:
- b) Key areas:
- c) Bubble diagram:

	Anthology, no. 17, Handel, "Amaz'd to Find the Foe so Near," from <i>Belshazzar</i> . a) Form and formal design:				
b)	Key areas:				
c)	Bubble diagram:				
cvei	RCISE 2 Listen to Beethoven's Symphony no. 3 in EbM (Eroica), op. 55, IV,				
and fo explai	ollow the score while you listen. Think of this movement as a set of variations and n exactly what each of the following statements means. These variations are on two elements: a bass (introduced in mm. 12–44) and a theme built on this bass.				
b) Measures 76–107 constitute a double variation (variation 3).				
c	The movement's first large section (part 1) is expository and ends in m. 107.				
d) Measures 107–116 are transitional to the movement's second large section (part 2). Part 2 begins and ends with imitative sections.				
e) Variation 4 is a contrapuntal variation.				

f) Measures 175-210 constitute a double variation (var. 5).

g)	A characteristic variation begins in m. 211 (var. 6).
h)	The variation in mm. 258–277 (var. 7) contains an inversion of the theme, and it also features change of mode.
i)	The variation beginning in m. 277 (var. 8) is a contrapuntal variation that closes part 2. One of its two subjects is related in some interesting way with the subject of the previous contrapuntal variation (var. 4).
j)	Part 2 is a section of tonal and modal contrast within the overall tonal design of the movement.
k)	The third large section of the movement (part 3) begins in m. 349.
1)	Variation 9 is a double variation that features a tempo contrast.
m)	Variation 10 presents a climactic "tempo augmentation" of the theme: Although it is written in the same values as usual, it sounds like an augmentation. Why, and where is it?
n)	A long coda begins in m. 396. This coda has several distinct sections. What are they? What distinguishes each of them?

o) Provide a formal diagram of this movement, showing the long-range grouping of variations and the overall tonal design.

Chapter 22

Contrapuntal Genres

A variety of new genres and styles emerged and were developed during the Baroque period (approx. from 1600 to 1750). Two very different textural principles can be found in these genres. In the homophonic **thoroughbass texture**, on the one hand, a melodic line is supported by a harmonic bass (in which leaps are frequent) and the chordal realizations of the figures that accompany the bass. Polyphonic genres, on the other hand, receive an enormous impulse in this period, both in vocal and instrumental music. The polyphonic or contrapuntal style is often combined with the thoroughbass texture in what we know as **continuo polyphony**, found for instance in J. S. Bach's sacred music (such as his cantatas and Masses). In continuo polyphony a figured bass is added to an otherwise polyphonic texture. Baroque polyphony in general, whether or not the figured bass is present, is eminently *harmonic*; that is, it is a contrapuntal elaboration of underlying functional harmonic progressions. In this chapter we will study two contrapuntal genres of the baroque period: the *invention* and the *fugue*. Because J. S. Bach brought each of these genres to its highest level of development, we will focus especially on examples by this composer.

The importance of studying the genres that we will cover in this chapter goes much beyond their immediate historical significance. Contrapuntal techniques, as found in these genres, are essential to the compositional style of any historical period. Fugue and fugal techniques have been used by composers all the way to the present. Learning about these genres is learning about musical process in general, and although the literature we will study is centered on the keyboard, contrapuntal genres and the musical processes they embody can be found in the literature for any instrument, and hence should be a relevant component, at least from an analytical point of view, in the education of any musician.

THE TWO-VOICE INVENTION

In 1723, J. S. Bach published a pedagogical collection of fifteen two-voice and fifteen three-voice keyboard pieces, titled Inventions and Sinfonias, respectively. Although this is not a common genre in the Baroque period (there are hardly any precedents for

it), Bach's inventions have become central pedagogical pieces both for the study of the keyboard and as compositional and contrapuntal models.

Although there is not a single standard type of tonal design and form in Bach's two-voice inventions, the following characteristics apply generally to the genre:

- 1. An **invention** is a *contrapuntal, imitative piece* in which the two voices are totally independent and equally important.
- 2. Inventions are characterized by *strict thematic unity*. They are usually built on a single theme, which is found pervasively throughout the composition.
- 3. Pieces begin with an *imitative* **exposition** (imitation is mostly at the octave, but in some cases it is at the fifth). The theme reappears in various keys within the invention.
- 4. Motion from one key area to another key area is effected by means of sequential passages, called **episodes**, often based on a descending or ascending circle of fifths.
- 5. Episodes are developmental areas in which the theme may be transformed in a variety of ways. In chapter 12 we studied some of the most frequent techniques of thematic development: Repetition and transposition, varied repetition (variation), sequence, change of mode, fragmentation, intervallic expansion and contraction, inversion, and rhythmic augmentation and diminution. All of these techniques may be found in developmental episodes in both inventions and fugues, and thus a review of chapter 12 might be useful at this point.
- 6. Secondary key areas normally involve *nearly related keys* such as the dominant, relative major or minor, and subdominant keys (sometimes also the supertonic key, the "dominant of the dominant").
- 7. The original key **returns** at the end of the invention, possibly along with a return of the initial point of imitation.

BACH: INVENTION NO. 3, IN DM

We will now analyze, as an example of the genre, Bach's Invention no. 3 in DM (anthology, no. 13).

- 1. *The Exposition*. This is the section in which the theme is presented by each voice in imitation. The exposition in our example comprises mm. 1–4 (to the downbeat of 5).
 - a) Comment on the *theme*: what is its rhythmic characteristic? Notice the two halves (m. 1 and m. 2): how are they symmetrical (consider the grouping of notes)? How is the largest leap "strategically" placed? Comment on the progressive ascent from 1 to 5, and the subsequent descent from 5 to 1.
 - b) What is the interval of imitation?
 - c) Examine the *counterpoint to the theme* in mm. 3–4. As a general principle throughout the invention, when one voice is active (in sixteenth notes), the other

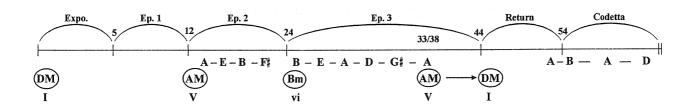
voice is less active (in eighth notes). Few measures in the whole invention feature sixteenth notes throughout the measure in both voices.

- 2. Episode 1. This episode (mm. 5-12) leads to the cadence on V (AM) in m. 12. It is remarkable in its simplicity: It is based on an A pedal (which establishes the new key) and on repetition rather than sequence. Notice the cadential formula in mm. 10-12: You will later see that Bach uses the same formula in each of the subsequent cadences. Comment on the motive in mm. 5-6. It is obviously derived from the theme, but with some variation. Explain exactly how it is derived.
- 3. Episode 2. A new episode (mm. 12-24) leads to the cadence in Bm (the relative minor) in m. 24. The first section, mm. 12-18, moves through an ascending fifth progression: A-E-B-F# (identify each of the steps in this circle of fifths on the score). The circle stops on F#, V in the new key of Bm.

Notice the imitative interplay ("give and take") between voices in mm. 12–18. Have notes been added to the original theme to come up with the version used in these measures? How does the motive proceed melodically in mm. 19–21? Do you recognize the cadential formula in mm. 22–24?

- 4. *Episode 3*. This episode (mm. 24–38) is also based on a "give and take" texture, and in this case voices are totally complementary: When one moves, the other is sustained. The episode leads to the cadence in AM (V) in m. 38.
 - a) The imitative passage in mm. 24–32 is built on a very familiar progression. What is it?
 - b) The passage in mm. 32–35, on the other hand, features an interesting free development on the theme, with active motion in both voices creating a drive toward the important cadence on V in m. 38.
 - c) The cadential gesture in mm. 36–38 is slightly varied with respect to the previous ones, but do you still recognize our basic cadential formula?
- 5. *The return.* An extension of the AM cadence (mm. 38–42) leads to the return of DM and to the recapitulation of the initial point of imitation (mm. 43–46). How does the motive proceed melodically in mm. 39–41?
- 6. The final episode and the codetta. Compare the episode in mm. 47-54 with episode 1 (mm. 5-12). How do they differ texturally? And how do they differ tonally?
 - a) Whereas the original episode has the function of leading away from the original key, this new, final episode stays within the key of DM and leads to what could be the closing cadence on D, in m. 54.
 - b) Instead, Bach writes a deceptive cadence and a **codetta** (a brief coda), now taking us to the closing statement of the cadential formula and to the final cadence on D.

After discussing the complete invention in class, study the tonal/formal graph in example 22.1, and understand how it represents the design and structure of the piece. Comment on the long-range tonal plan provided by the key areas (circled in our graph).



What familiar linear melodic figure is it based on? How is this plan replicated at a smaller scale in the return-codetta sections (mm. 44–59)?

ra vilja ir sagragas grva usiglja i krastoja stratika akoj usiristiga kalijuta (sagrafia).

The chart in example 22.2, on the other hand, is what we call a "distributional graph," a comparative study of melodic segments. By placing related motives one on top of the other we can see exactly how they are derived from the initial theme. Comment on this graph and how it shows the thematic transformations undergone by the original subject.

Example 22.2



Chapter 22

To practice analyzing an invention, refer to exercise 1 in worksheet 22 at the end of this chapter.



THE FUGUE

The contrapuntal genre par excellence, the **fugue**, developed throughout the sixteenth and seventeenth centuries to become one of the most elaborate and complex compositional types and a symbol of good contrapuntal and compositional craft. The genre reached its peak with J. S. Bach. As Robert Gauldin wrote in his counterpoint textbook, A Practical Approach to Eighteenth-Century Counterpoint (Englewood Cliffs, NJ: Prentice Hall, 1988), "despite the great accomplishments of the late Baroque masters, their efforts in the area of fugue pale against the achievements of J. S. Bach" (p. 210). Gauldin adds: "The fugal output of J. S. Bach is staggering. Aside from the collections (two volumes of the WTC, the seven Toccatas and Fugues for keyboard, and Die Kunst der Fuge [The Art of Fugue]), there are at least forty significant fugues for organ. These do not include the numerous choral movements cast in fugal style from cantatas or oratorios." The WTC is the Well-Tempered Clavier, a collection of forty-eight preludes and fugues in two volumes (24 + 24), each of which contains a prelude and a fugue in each of the twenty-four major and minor keys.

Just as with the invention, there is not a single formal or tonal type for the fugue. The fugue is a compositional procedure that can be adapted to numerous formal and tonal designs. In general, however, we can define the following characteristics for the genre:

- 1. A fugue begins with an imitative **exposition**, in which a **subject** presented by one voice is imitated by each of the other voices at the fifth (in the key of the dominant) or at the unison/octave (in the tonic key).
- 2. The remainder of the fugue is usually made up of alternating *middle entries*, statements of the *complete subject* in a variety of keys, and **episodes**, modulatory passages with a developmental character, usually sequential and based on the ascending or descending circle of fifths. After a modulating episode, the subject may be stated by a single voice (**middle entry**, ME), or by several voices in imitation (**middle entry group**, MEG).
- 3. Modulations are usually to closely related keys, although consecutive modulations may end up leading to keys distant from the original home key. At the end of the fugue there is a return to the tonic key, with or without a recapitulation of the subject in this key.
- 4. A variety of contrapuntal devices may be used throughout the fugue. Among these, the most common are the **stretto** (imitation of the subject at a closer metrical distance than the original imitation), augmentation or diminution, and inversion.
- 5. Fugues are often seamless formal entities, not clearly sectional, and we perceive them as a continuous flow of rhythmic and harmonic activity. They often create increasing and cumulating tension which may not be resolved until the final cadence.

The Exposition: Subject and Answer

Sing or play through the five subjects in example 22.3. In all of these examples you will notice some general traits of a good fugal subject: They all have definite, characteristic contours; they also have definite, characteristic rhythmic designs. Both traits together make these subjects clearly recognizable when they appear within the fugue. Moreover, a good subject usually has a strong rhythmic drive that propels it forward; it breaks easily into motives (thus allowing for fragmentation in developmental episodes), and it often has two contrasting halves (see subjects b, c, and d in example 22.3).

Now listen, following the score, to mm. 1–9 of Fugue no. 2 in Cm, from *The Well-Tempered Clavier*, I, anthology, no. 14). This fugue is in three voices, and this passage introduces all three, each beginning with a statement of the two-measure subject. In mm. 1–2, the alto states the *subject* in Cm, the tonic level. In mm. 3–4, the treble states the subject at the 5th, that is, at the dominant level. We will call this the **answer** (the subject transposed up a 5th). Finally, in mm. 7–8, the bass enters with the subject, again at the tonic level. Measures 1–9 are thus this fugue's *exposition*. The exposition ends as soon as the last voice completes its statement of the subject.

Real and Tonal Answers

You may have noticed that the answer of the Cm fugue (mm. 3–4) is not literally at the 5th: the initial interval C-G $(\hat{1}-\hat{5})$ in the subject is not answered with a G-D $(\hat{5}-\hat{2})$, but rather with a G-C $(\hat{5}-\hat{1})$. After this initial adjustment, however, the answer is not only a literal transposition of the subject at the upper 5th, but moreover it is in Gm, the key of the dominant. This type of answer, which includes a minor adjustment, usually at the beginning, is called **tonal answer**. Examine, on the other hand, the subject and answer in example 22.3a. Here the answer is literally at the 5th throughout. This is a **real answer**.

The following principles summarize the most frequent cases in which a subject will require a tonal answer:

- 1. If the subject begins on $\hat{5}$, the answer will usually begin on $\hat{1}$ and *not* on $\hat{2}$ (see example 22.3c).
- 2. If the subject begins with a motive based on $\hat{1}-\hat{5}$, the answer will respond with $\hat{5}-\hat{1}$ (and not $\hat{5}-\hat{2}$), as in example 22.3b. Similarly, a $\hat{5}-\hat{1}$ beginning will be imitated with $\hat{1}-\hat{5}$ (and not $\hat{2}-\hat{5}$), as in examples 22.3c and d.
- 3. A $\hat{1}-\hat{7}$ beginning will be imitated with a $\hat{5}-\hat{3}$ instead of $\hat{5}-\hat{4}$. See example 22.3e, where the initial $\hat{1}-\hat{7}-\hat{1}$ is answered with a $\hat{5}-\hat{3}-\hat{4}$, and not a literal $\hat{5}-\hat{4}-\hat{5}$.

The reason for each of these changes is that, although answers as a whole are in (or modulate to) the dominant key, it is customary that the opening motive (usually only two or three notes) is in the tonic key, in order to fit tonally with the end of the subject on the tonic. Minor adjustments like the ones we have just discussed are sufficient to solve the problem. Example 22.3f illustrates a connection between a subject and its tonal answer, followed by the tonally impossible connection with a real answer.

🔝 Example 22.3





EXERCISE

To practice writing fugal answers, refer to exercise 4 in worksheet 22 at the end of this

BACH: FUGUE NO. 2 IN Cm FROM THE WELL-TEMPERED CLAVIER, I

We will now study Bach's Cm fugue, reproduced in anthology, no. 14.

1. The exposition. We have already discussed the subject/answer entries in the exposition (mm. 1–9), and the tonal answer. When in a fugue the second voice comes in with the answer, the first voice provides a counterpoint to it (mm. 3-4). If the same counterpoint is repeated every time (or most of the time) the subject (S) appears in later entries, we call it a **countersubject** (CS). In this case, this is indeed a countersubject. Verify its appearance in mm. 7-8, 11-12, 15-16, 20-21, and 26-28, in all cases accompanying the subject. In mm. 7–8, the third voice comes in with S, the treble carries the CS, and the alto provides a further counterpoint, which, in this fugue, also appears every time S is stated subsequently. We will then call this second counterpoint CS2 (the previous CS then becomes CS1). Verify its appearance in all the statements of S listed above.

The bridge. The answer, in m. 5, ends in Gm. But the new entry, the subject again, must begin in the tonic key. Before the subject comes in again, we need to modulate back to Cm. This modulation from the dominant to the tonic after the end of the answer is called the **bridge** (mm. 5–6). What techniques of melodic development do you recognize in this passage? Where are both voices derived from, and how? How do the motives proceed melodically?

Double and triple counterpoint. Expositions are often written in invertible counterpoint: Voices may be texturally switched (top becomes bottom, and bottom becomes top) and the counterpoint still works. Invertible counterpoint in two voices is called double counterpoint; in three voices it is triple counterpoint. Compare mm. 17–18 with the bridge (mm. 5–6). Aside from the minimal addition of the treble in parallel 3rds with the bass motive, you will see that mm. 17–18 are basically built on the same two voices as mm. 5-6, only now they are inverted (and transposed). Measures 5-6 are thus written in invertible (double) counterpoint. Compare now mm. 20-21 with 7–8. The tonal level and pitch content are the same, but in mm. 20–21 all three voices have been switched around. Measures 7-8 are thus written in triple counterpoint.

- 2. The middle entries (ME): tonal plan. Middle entries are the complete statements of S throughout the fugue. Mark them on the score, and notice that they always appear in the form of S/CS1/CS2:
 - a) ME1, El M (III), mm. 11–12.
 - b) ME2, Gm (v), mm. 15-16 (the subject begins in Cm and modulates to Gm; it actually appears in the form of the answer, as in mm. 3–4).
 - c) ME3, Cm (i), mm. 20-21.
 - d) ME4, Cm (i), mm. 26-28.

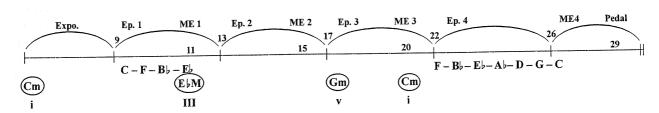
The tonal plan for this fugue is straightforward: ME1 is in the relative major key, ME2 is in the minor dominant key, and ME3 is the return to i, and also a recapitulation, in Cm, of the complete three-voice statement of S/CS1/CS2 from mm. 7–8. ME4 is a final restatement of the three-voice complex, confirming the return to the tonic key, Cm.

The Pedal. Fugues often include a pedal point toward the end, on either the dominant or the tonic. The function of this **pedal** is to help release the accumulated harmonic and rhythmic tension created throughout the fugue. In our example, Bach wrote a pedal on î after the final perfect authentic cadence (PAC) in m. 29. Over the pedal, he wrote a final statement of S with a beautiful harmonization full of biting dissonances.

- 3. *The Episodes*. The above key areas and middle entries are connected by means of the following modulating episodes:
 - a) Episode 1, mm. 9–10. Modulates from Cm to E♭M by means of a four-step circle of 5ths: C-F-B♭-E♭ (verify each step on the score). Where is the thematic material in each voice derived from? How are the two upper voices related texturally and contrapuntally?
 - b) *Episode 2, mm. 13–14*. Moves from El-M to Gm by means of an ascending circle of 5ths: El-Bl-F-C-G (identify each step on the score; several of these chords appear in first inversion). Comment on the melodic material: Is any of it derived from S?
 - c) Episode 3, mm. 17–19. Modulates from Gm back to Cm in two sequences up by steps (identify both sequences, each of which has three segments). We have already seen that this episode is directly related with the bridge through invertible counterpoint.
 - d) Episode 4, mm. 22–26. Does not modulate, but rather leads from Cm to Cm through a complete circle of 5ths. Identify each of the steps in the circle. Compare this episode with episode 1: They are both based on the same material, but whereas in episode 1 the circle stopped at Eb, here it continues until it reaches C again. Comment on the texture: How do the voices function contrapuntally? Are there any examples of continuous motion and of "give and take" counterpoint?

After you have studied this fugue, examine the tonal/formal graph in example 22.4, and understand how it summarizes the design and structure of this piece. Then listen to the fugue again and try to hear everything we have discussed.

, ∫**.** Example 22.4



SOME ADDITIONAL FUGAL TECHNIQUES

Apply your knowledge of fugue to the analysis in class of Bach's Fugue no. 11 in FM, from *The Well-Tempered Clavier*, I (anthology, no. 15). Besides the usual concepts and sections that we have already studied, in this fugue you will find the following additional elements:

- 1. Counterexposition. After the exposition (mm. 1–13) and a brief nonmodulating episode (mm. 13–17), you will see that all three voices come in again with the same subject-answer-subject statements as before, still in the tonic key (mm. 18, 22, and 26, respectively). This "repetition" of the exposition is called a **counterexposition**. It may be in the tonic key, as in this case, or it may be in a related key.
- 2. Stretto. Examine the middle entry groups in mm. 37–44 and 47–54. In both MEGs all three voices state the subject. But if you compare the metric distance between statements here (two measures in each case) and in the exposition (four measures), you will see that in the MEGs entries are closer. Each of these MEGs is actually a stretto, a presentation of the subject in imitation at a closer distance than the original imitation.

Finally, study the exposition in example 22.5. This fugue is in three voices, but if you listen carefully you will hear "four" voices coming in in the exposition: alto (subject, m.1), treble (answer, m. 3), "tenor" (subject, m. 8), and "bass" (answer, m.12). That is, a full S-A-S-A cycle in four voices. The fourth entry is what we call an **extra entry**, and it allows the "faking" of a four-voice exposition in a three-voice fugue.



EXERCISE

To practice analyzing a fugue, refer to exercise 2 in worksheet 22 at the end of this chapter.

THE FUGATO

Composers sometimes use fugal techniques in the context of compositions other than fugues, such as variation forms. In such cases the fugal passages often take the form of a fugal exposition or perhaps the exposition and a developmental section (an episode), after which the texture changes back to a nonfugal, or even noncontrapuntal, style. Such a passage in the style of a fugal beginning in the context of larger formal types is called a **fugato**. You may listen to two fugatos in the last movement of Beethoven's Symphony no. 3, *Eroica*. The movement is a set of variations, and the large-scale middle section is both introduced and closed by fugatos. Listen to the opening fugato in mm. 117–175, and the closing fugato in mm. 277–348. To see where the subject of the first fugato comes from, listen to the opening of the movement. How is the subject of the second fugato related to the subject of the first fugato?

J. S. Bach, Fugue no. 8 in D#m, from The Well-Tempered Clavier, I, mm. 1-14



Notice also that in the second fugato, each entry of the subject in half notes is accompanied by a countersubject (or a second subject) in sixteenth notes. A fugue in which there are two subjects is called a **double fugue**. Beethoven's second fugato is, then, a double fugato. For an excellent example of double fugue, in which the main subject is always presented simultaneously with a countersubject, you may want to listen to the "Kyrie" from Mozart's *Requiem*.

PRACTICAL APPLICATION AND DISCUSSION

- 1. What have you learned in this chapter that you would consider valuable as a musician?
- 2. What do you know now that you did not know before about formal and tonal processes in the baroque period, and about musical processes in general? What have you learned about compositional craft?
- 3. How does this affect your understanding of the music you play and listen to? For instance, how does it affect your perception or performance of the Cm fugue?
- 4. Do you think you will be able to apply any of this knowledge in the future when you study an invention or a fugue?
- 5. Have you played any pieces in any of the genres we have studied in this chapter? Do you understand them better now? How? How does this understanding affect your performance? Can it give you a better sense of direction, of phrasing, of the role of sections as long-range formal and tonal units, of the piece as an organic whole made up of related parts?
- 6. Can you demonstrate any of the above by performing something in class?



EXERCISE

For an assignment of an anlytical paper on a fugue, refer to exercise 3 in worksheet 22 at the end of this chapter.

FOR FURTHER STUDY

For additional chapter 22 materials, refer to the Harmony in Context Web page at www.mhhe.com/roigfrancoli2e.

ASSIGNMENT

For analytical and written assignments based on the materials learned in this chapter, refer to chapter 22 in the workbook.

Terms for Review

Thoroughbass texture Continuo polyphony Invention:

Exposition, Episodes, Return, Codetta

Fugue:

Exposition, Subject, Episodes, Middle entry, Middle entry group, Stretto, Answer, Real and tonal answers, Countersubject, Bridge, Invertible counterpoint, Double and triple counterpoint, Pedal, Counterexposition, Extra entry

Fugato
Double fugue

Worksheet 22



EXERCISE 1 Analyze Bach's Invention no. 6 in EM (the score and recording will be available at your music library). Turn in an annotated copy of the score, and answer the following questions.

1.	Explain the characteristics of the exposition. How are the voices related in mm. 1–4 as compared to mm. 5–8? Provide the exact term for this type of counterpoint.							
2.	Measures 9–20. What is the harmonic function of this section?							
	What thematic/harmonic techniques are used (be very specific, and circle pitches or fragments on the score as needed to illustrate what you mean).							
	en de la companya de							
	• The state of the							
3.	Measures 21–28. Describe this section formally and tonally.							
4.	Measures 29–42. What is the formal function of this section within the whole piece? What techniques are used?							
	What is the main key of this section? What other secondary key areas are briefly touched on in mm. 33–36?							
5.	What is the formal and harmonic function of the section beginning at m. 43?							
	Will be analysis							
6.	Measures 51–60 are equivalent to a previous section in the piece. Which section (No. 2002) How do the two sections differ tonally and texturally?							

7. What is the overall form of the piece? Provide a simple bubble diagram (use the line provided below) with clear indication of sections and keys. Is there a standard term to designate this characteristic tonal and formal type?

EXERCISE 2 Analyze Bach's Fugue in BbM, WTC, I, no. 21. The score and recording are available at your music library. On a copy of the score, provide a complete analysis of the fugue, indicating the usual, characteristic sections (including all appearances of the subject or answer) and contrapuntal or developmental techniques as they are found in this particular example. You may use some clear abbreviations such as S (subject), A (answer), ME (middle entry), Ep. (Episode). Be sure to mark on the score all appearances of such devices (if they are present in this fugue) as inversion, stretto, augmentation, and so on, and such techniques as fragmentation, sequence, circle of fifths, and so forth. Indicate also all the main keys or key areas.

Answer the following specific questions.

- 1. Is there a countersubject, or maybe more than one? If so, provide measure numbers and voice for its (their) first appearance.
- 2. Indicate two passages (provide two sets of measures) related by invertible counterpoint. Is it double or triple?
- 3. Is the answer real or tonal? Why is it as it is (real or tonal)?
- 4. Is there a bridge (provide mm. nos.)? What is the function of a bridge in a fugue?

- 5. Is there an extra entry (mm. nos.)?
- 6. Where does the exposition end?
- 7. Is there a counterexposition? What is a counterexposition?
- 8. Is there a stretto? What is a stretto?
- 9. Is there a return? Where?
- 10. Is there a pedal? Where?

EXERCISE 3 Write a brief analytical paper on Bach's Fugue in Gm, WTC, I, no. 16 (score and recording available at the library). You may use the discussion of the Cm fugue on pages 532–533 of the text as a model. The organization by sections used in that analysis is perfectly appropriate for your paper. Turn in an annotated score with clear indication of keys, tonal areas, cadences, sections, and compositional or contrapuntal techniques. Make sure you discuss (and mark on the score) the following specific points:

- 1. Subject.
- 2. Answer: tonal or real? Why?
- 3. Countersubject and invertible counterpoint.
- 4. Bridge.
- 5. Length of exposition.
- 6. Counterexposition? In what key?
- 7. All episodes and middle entries.
- 8. Stretto.
- 9. Return, pedal.
- 10. Any instances of inversion, augmentation, or diminution of the subject?

EXERCISE 4 Determine whether the answer to each of the following fugal subjects should be real or tonal. Then write the appropriate answer for each of them.



Chapter 23

Modal Mixture

The harmonic chromaticism we have studied so far results from tonicization or modulation. In the first part of this chapter we will study **modal mixture**, a type of chromaticism resulting from the mixture of scales and harmonies from the two different modes (major and minor) of the same key. Such mixture between the major and minor forms of the same key (that is, the parallel major/minor keys) can take the form of a change of mode for a fragment of music, or it can simply appear as a single chord from one mode used, or "borrowed," in the parallel mode. In all cases, the main scale in use, major or minor, is enriched chromatically by some pitches from the parallel scale. As a review of what these possible pitches are, look at example 23.1 for a comparison of scale degrees in each of the modes.

Although there are not so many different degrees between the modes, the chords that involve the different degrees are numerous. The main differences are the $\[\downarrow \] \hat{\beta}$, $\[\downarrow \] \hat{\delta}$, and $\[\downarrow \] \hat{\gamma}$ in the minor mode. A number of chords that involve these degrees in the minor mode do not exist in the diatonic parallel major mode. There are also chords from the major mode that do not exist in minor. The term **borrowed chord** refers to a chord from one mode used in the other mode (that is, the borrowing takes place between parallel keys). As an exercise, make a list of chords from each mode that could be borrowed in the other mode. Although in principle borrowing chords from one mode into the other can go either way, it is more common to borrow chords from the minor mode into the major mode, and this will be the main focus of our discussion in this chapter.

Example 23.1

N	1 :	1	2	3	4	5	6		7	1
n	n:	1	2	b 3	4	5	b6 46	67	47	1

BORROWING CHORDS FROM THE MINOR MODE IN A MAJOR KEY

The triads from the (harmonic) minor mode that are foreign to major are i, ii°, III, iv, and VI. Three of these, ii°, iv, and VI, *involve the degree* $\hat{\delta}$. The same degree, moreover, is also present in ii², and its inversions. All of these chords may be effectively borrowed in major modes, and among them the chords involving $\hat{\delta}$ (which in a major-mode context becomes $\hat{\delta}$) are the most frequently borrowed. Another chord that properly belongs to the minor mode because of its inclusion of $\hat{\delta}$, and which is often used in major keys, is vii°, Although this chord is indeed a borrowed chord when used in the major mode, we will not include it in this chapter because we already studied it in chapter 15.

iv and ii^o₇ in the Major Mode

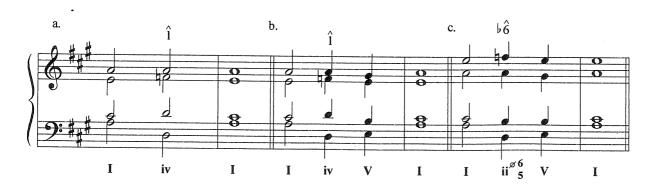
The minor subdominant $(\hat{4} - \hat{b} - \hat{1})$ is used effectively in major keys as either a tonic prolongation (including plagal cadences) or as a pre-dominant chord (see the sample progressions in examples 23.2a and b). A iv prolonging a major tonic appears in example 23.3a. Notice how the simple use of \hat{b} instead of \hat{b} as an upper neighbor to $\hat{5}$ adds an element of chromatic and expressive interest to the passage. A similar plagal prolongation of I by means of iv can be observed in the plagal cadence that follows the perfect authentic cadence (PAC) in example 23.3b.



NOTE

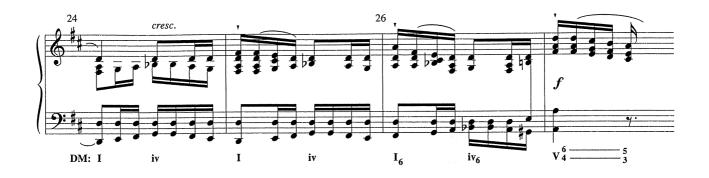
The symbol $iv^{add 6}$ in example 23.3b refers to an "added sixth chord," a common sonority in popular music and jazz. An added sixth chord consists of a triad plus a sixth as in our example, $A\flat - C\flat - E\flat - F$. We would think of this chord in the last measure of our example as $iv^{add 6}$ rather than ii_5^6 (although the pitch content of these two chords is the same) because it is part of a clear plagal cadential gesture (I-iv-I).

Example 23.2



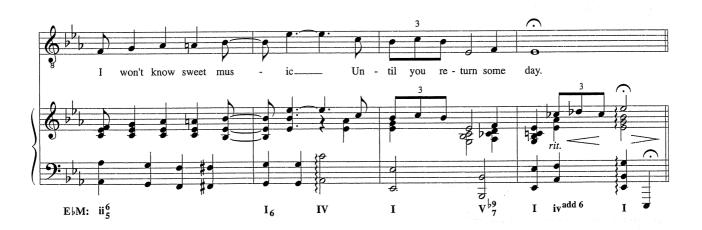
Example 23.3a

Felix Mendelssohn, Song without Words, op. 102, no. 2, mm. 24-27



Example 23.3b

D. Ellington, "I Let a Song Go Out of My Heart" (final cadence)



The minor-mode supertonic seventh chord, ii°_{7} , is used as a pre-dominant chord in the major mode even more often than iv (see example 23.2c). In example 23.4, Bach approaches the cadential dominant in FM by means of a ii°_{5} , the most frequent form of this chord. Notice that, here also, $b\hat{6}$ appears as an upper neighbor to $\hat{5}$. Other inversions of ii°_{7} , however, are also found in the literature. In mm. 26–27 of example 23.5 we hear two occurrences of ii°_{3} . Although in m. 27 it precedes a dominant that moves on to the tonic, both ii°_{3} chords in mm. 26 and 27 also have a linear function (see both the neighbor motion in the bass and the passing motion in the soprano). Examine also the rest of the example. Does it feature any tonicization?

In example 23.6, Beethoven takes advantage of the chromatic possibilities afforded by \$\ddot6\$ and \$\ddot6\$ by using both degrees in an interesting melodic interplay. The passage is in \$\ddot8\$M.

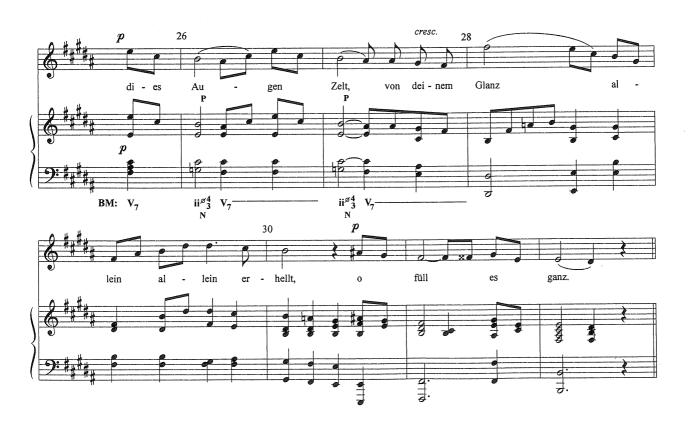
Example 23.4

J. S. Bach, Chorale 6, "Christus, der ist mein Leben," mm. 7-8



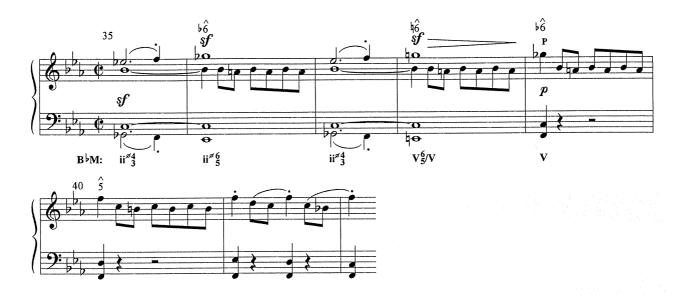
Example 23.5

Fanny Mendelssohn Hensel, "Du bist die Ruh," from Six Songs, op. 7, no. 4, mm. 26–32



⇒ Example 23.6

L. v. Beethoven, Piano Sonata in ElM, op. 81a, I, mm. 35-42



Mm. 35–36 feature two inversions of the ii°_{7} chord, connected by a passing tone (note the voice exchange between outer voices in these measures). The melodic arrival on $\flat \hat{6}$ in m. 36 turns into an arrival on $\flat \hat{6}$ in m. 38, here harmonized with a V_{5}^{6}/V . The $\flat \hat{6}$ in m. 39, on the other hand, functions as a passing tone between $\flat \hat{6}$ (m. 38) and $\hat{5}$ (m. 40), over V.

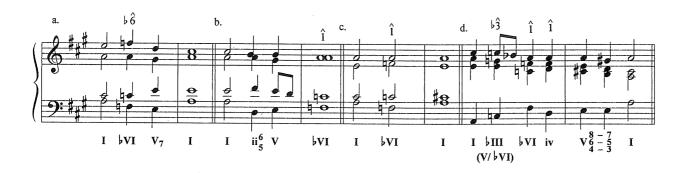
bVI and bIII in the Major Mode

The notation "VI" and "III," that is, a Roman numeral preceded by a \downarrow sign, refers to chords built on lowered scale degrees. Thus, the \downarrow sign before the Roman numeral affects the root of the chord: VI is a major chord built on $\downarrow \hat{6}$, and $\downarrow III$ is a major chord built on $\downarrow \hat{3}$ (notice that the same two chords in the minor mode are diatonic, and hence labeled as VI and III).

 \flat VI is a beautiful chromatic chord, used with a variety of functions, all similar to the functions of the diatonic submediant, vi (see examples 23.7a to c). \flat VI includes two chromatic degrees, \flat ô as the root, and \flat 3 as the fifth. Because of the strong half-step pull of \flat ô toward \$, \flat VI can effectively function as a *pre-dominant chord*. This is exactly how it is used by Haydn in example 23.8.

On the other hand, V may also resolve to \forall VI in a striking, chromatic *deceptive progression*. In example 23.9, the dominant of EM in m. 102 resolves deceptively to a CM chord, a \forall VI in EM. Observe, however, that this \forall VI is then tonicized, creating a brief \forall VI secondary key area (mm. 103–105). The resolution of \forall 6 in the bass to 5 in mm. 106–107 takes us back to V in EM. (Notice the strong linear pull toward 5 created by the double half-step resolution of C *down* to B\(\dagger and A\(\dagger up to B\(\dagger; we will study the chord that results from this voice leading, an augmented sixth chord, in the next chapter.) The end of the passage is built on a pedal on $\hat{5}$. What chords does Beethoven write on this pedal?

🕽 Example 23.7



Example 23.8

J. Haydn, Symphony no. 101 in DM, IV, mm. 13-16

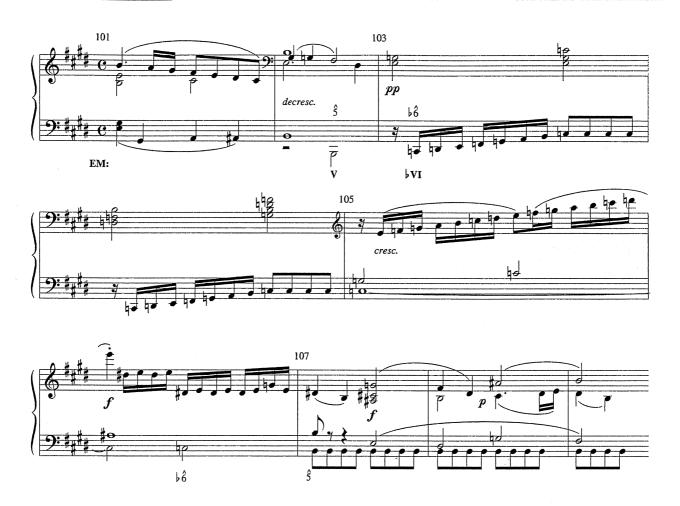


Typical Errors to Avoid

- ▶ Writing parallel 5ths and or 8ves in the VI–V progression. The VI–V₇ progression is easier to write from this point of view.
- ▶ Writing parallel 5ths in the V-VI deceptive progression. The standard voice-leading rules for the V-vi progression also apply to the "borrowed" deceptive progression.

Example 23.9

L. v. Beethoven, Piano Sonata in EM, op. 14, no. 1, I, mm. 101-109



bVI may also function as a chord prolonging, or embellishing, the major tonic. Example 23.10 shows an instance of such a chromatic, prolonging progression, I-bVI-I. The cadence also involves another borrowed chord. What is the chord, and what kind of cadence is this?

bIII is a relatively unusual chord. When it appears in the literature, it is often paired with bVI, and, in fact, it is often used as the secondary dominant of bVI (example 23.7d). In Modest Mussorgsky's phrase reproduced in example 23.11a, in EbM, bIII is indeed coupled with bVI in the progression bVI→III (or bVI→V/bVI, although the secondary dominant progression never continues to its possible resolution, bVI). These chords here function as a surprising chromatic extension of the EbM tonic triad that is prolonged in this passage. In example 23.11b, on the other hand, bIII appears, in the context of a plagal cadential gesture, as part of a passing motion from IV to I (IV-bIII−P⁶₄–I).

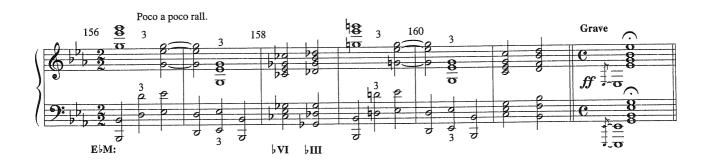
Example 23.10

J. Brahms, Symphony no. 3, II, cadence (mm. 128-134)



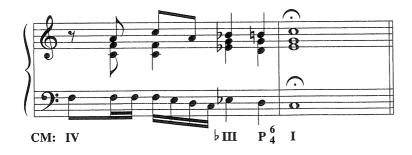
Example 23.11a

Modest Mussorgsky, "The Great Gate of Kiev," from *Pictures at an Exhibition*, mm. 156–162

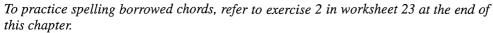


Example 23.11b

George Harrison, "Something," from the album Abbey Road (The Beatles)



EXERCISE





To practice realizing progressions including modal mixture, refer to exercise 3 in worksheet 23 at the end of this chapter.

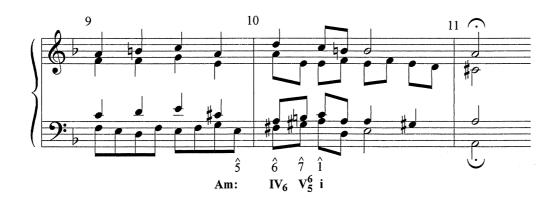
To practice harmonizing a melody including modal mixture, refer to exercise 4 in worksheet 23 at the end of this chapter.

BORROWING CHORDS FROM THE MAJOR MODE IN A MINOR KEY

Theoretically, the triads from major that are foreign to minor are I, ii, iii, IV, and vi (V and vii° are the same in both modes if we use the harmonic minor scale). Borrowing chords from the major mode in a minor key is less frequent than the other way around (borrowing from the minor mode in a major key). The only chords from major that are found in minor keys with some frequency are I, the major tonic chord, most often used in the context of a final tonic with Picardy third, and IV, used to harmonize $\sharp \hat{6}$ in the melodic-minor ascending segment $\hat{5}-\sharp \hat{6}-\sharp \hat{7}-\hat{1}$. Because we have already studied both of these cases (review examples 3.5g and h, and example 9.4e), we need not discuss them all over again, other than commenting on the short illustration that appears in example 23.12. The passage begins in FM and modulates to Am. The actual move toward Am is effected by the bass line in m. 10, with a strong $\hat{5}-\sharp \hat{6}-\sharp \hat{7}-\hat{1}$ melodic figure, where $\sharp \hat{6}-\sharp \hat{7}-1$ is harmonized with the progression $IV_6-V_5^6-i$. Does the passage actually end on an Am chord? Which of these chords are borrowed from the major mode? Now go back

Example 23.12

J. S. Bach, Chorale 96, "Jesu, meine Freude," mm. 9-11



to m. 9. Are there any tonicizations in the short span leading from FM to Am? Bach truly could pack a lot of interesting harmony into only a couple of measures!

CHANGE OF MODE

Changes of mode from major to minor or from minor to major of the same key are frequently found in music. In purely instrumental music, modal change is normally used for tonal contrast and to introduce a factor of chromatic variety. Thus, a phrase that is first presented in a mode may be restated in the opposite mode rather than repeated in the same mode. Notice the element of surprise produced by the second phrase of Antonín Dvořák's period reproduced in example 23.13. The sense of forward motion that we feel because of the sudden change to GM could not have been matched by the simple repetition of the phrase in Gm.

In texted vocal music, modal change often has an expressive purpose, reflecting musically some aspect of the text, while also providing a factor of tonal variety. Listen to the fragment in example 23.14. The initial key is Am, while the mill worker explains how much more he could do if he had a thousand arms. (How is the constant turning of the millstone represented by the music?) Then, in mm. 16–19, we find out why he

Example 23.13

Antonín Dvořák, Slavonic Dance in Gm, op. 46, no. 8, mm. 1-8





wishes he could perform such feats at the mill: to impress "die schöne Müllerin," the lovely millermaid. At the mention of the millermaid, the heart of the miller boy brightens up, and so does the music. How? As an unrelated question, can you explain the chromaticism in mm. 11–15?

CHARACTERISTIC SOPRANO-BASS PATTERNS AND ELABORATIONS OF THE I-V-I PROGRESSION

The most characteristic melodic degree that can be harmonized with iv, ii $^{\circ}_{7}$, ii $^{\circ}_{5}$, or $^{\circ}_{7}$ is $^{\circ}_{6}$. Both iv and ii $^{\circ}_{7}$ work well to harmonize $\hat{1}$ and $\hat{4}$, and ii $^{\circ}_{5}$ can also harmonize $\hat{2}$. Besides $^{\circ}_{6}$, $^{\circ}_{7}$ VI can also be used to harmonize $\hat{1}$ or $^{\circ}_{7}$ Examples of progressions illustrating harmonizations of each or these degrees are shown in example 23.15, in the context of characteristic soprano-bass patterns using modal mixture.

Because the borrowed chords we have studied function either as extensions of the tonic (for instance, in the I-iv-I or I \rightarrow VI-I progressions) or as pre-dominants (as in I-iv-V-I or I-ii $^{\circ}_{5}$ -V-I), their role in elaborating the I-V-I progression is the same as the role of the familiar diatonic (that is, not borrowed) versions of the same chords. For instance, the progression I-iv-V-I elaborates the I-V-I progression in the same way as the I-IV-V-I progression; I-ii $^{\circ}_{5}$ -V-I is equivalent to I-ii $^{\circ}_{5}$ -V-I; and I \rightarrow VI-iv-V-I functions as I-vi-IV-V-I does. These progressions with borrowed chords are chromatic versions of familiar diatonic progressions that elaborate the I-V-I progression.

Example 23.15

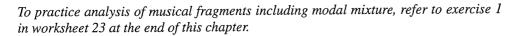


PRACTICAL APPLICATION AND DISCUSSION

For a summary of most of the borrowed chords we have just discussed, refer now to anthology, no. 53 (Verdi, *Il trovatore*, act 2, no 11). In the first place, what is the progression in mm. 5–6? Now examine the progression in mm. 7–8. In m. 7 we see an example of III functioning as the dominant of VI, in the progression V/VI-VI-VI. The latter chord acts here as a pre-dominant, and the dominant prolongation in m. 8

seems to lead to a tonic in m. 9. Instead, the cadence is interrupted (or delayed) in m. 9 by a IV₄⁶ which begins a new cadential process. What other pre-dominant chords are present in mm. 9–10? Which one is tonicized? Which one is a borrowed chord? Notice that this second cadential process finally finds resolution in m. 11.

EXERCISE





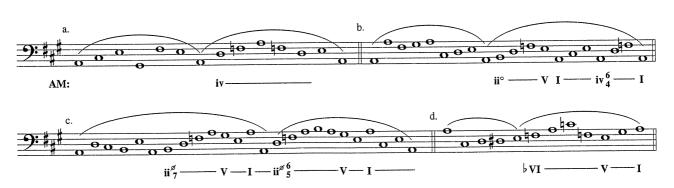
ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 23 in the workbook.

PITCH PATTERNS

Sing the pitch patterns in example 23.16, and as you sing listen to the borrowed chord used in them. Then improvise similar pitch patterns using a variety of borrowed chords.

2. Example 23.16



Terms for Review

Modal mixture Borrowed chords Borrowing from m into M iv and ii°₇ in the major mode bVI and bIII in the major mode Borrowing from M into m Change of mode

Worksheet 23

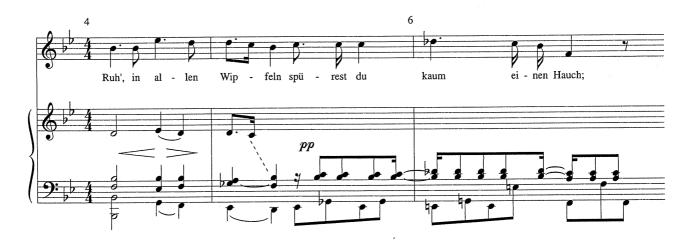


EXERCISE 1 Analysis.

- 1. Analyze and explain the type of modal mixture in the following examples. If borrowed chords are involved, be specific as to what they are.
 - a) Example 23.17.

L Example 23.17

F. Schubert, Wanderers Nachtlied, op. 96, no. 3, mm. 4-6



- b) Example 23.18. In this example, some chromaticism results from tonicization, and some from borrowing. Explain all of it. Explain also the modulation.
- c) Anthology, no. 59, Beach, Ecstasy, mm. 27–31.
- d) Example 23.19.

Example 23.18

F. Chopin, Mazurka in GM, op. 67, no. 1, mm. 38-49





Example 23.19

J. S. Bach, Chorale 96, "Jesu, meine Freude," mm. 1-6



e) Example 23.20.

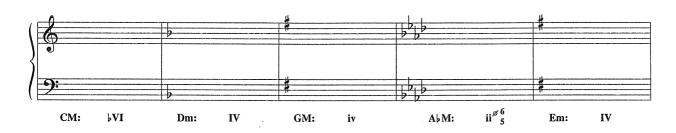
ک Example 23.20

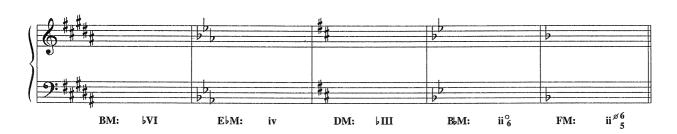
W. A. Mozart, Piano Sonata in BbM, K. 333, I, mm. 86–95



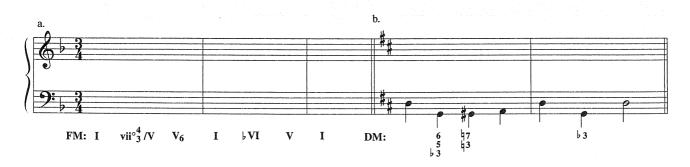
- f) Anthology, no. 48, Schumann, "Widmung," mm. 3-6 and 10-13.
- g) Anthology, no. 31, Paradis, Sicilienne, mm. 1–6.

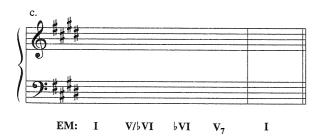
EXERCISE 2 Spell the following borrowed chords in four voices in the given keys.



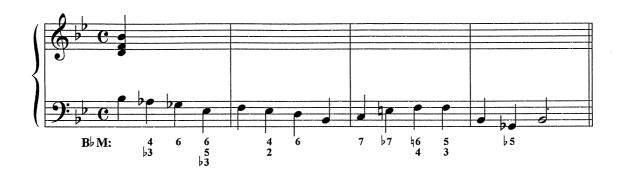


EXERCISE 3 Realize the following short progressions in four voices.





EXERCISE 4 Realize the following progressions in four-voice keyboard texture. Provide a RN analysis.



EXERCISE 5 Harmonize the following melody with a left-hand keyboard figuration, using borrowed chords where possible. Be sure to check your first-species outer-voice frame for correct voice leading.



EXERCISE 6 Write your own progressions (bass and RNs) in the keys and meters indicated below. Use the required chords, and any of the other chords we have already studied.

- a) DM; include iv and a deceptive cadence to \(VI. \)
- b) E|M; include ii⁶, |III, and |VI.

a.

9: ## 3/4

DM:

9: 1, 4

E♭M:

b.

Chapter 24

The Neapolitan Chord

In chapters 24 and 25 we will study two types of chromatic chords that have a special expressive and dramatic power: the Neapolitan chord ($heta\Pi$) and the augmented-sixth chords. Both types are based on the strong voice-leading tendency created by half-step relationships above and below such fundamental scale degrees as $\hat{1}$ and $\hat{5}$. Both appear in a variety of harmonic contexts, although their most common function is as predominant chords.

THE NEAPOLITAN SIXTH

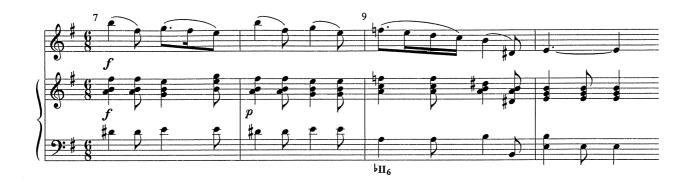
Study the passage by Paradis in example 24.1. The bass figure in the cadence is the familiar $\hat{4}$ – $\hat{5}$ – $\hat{1}$. The first chord in m. 9, however, on the bass $\hat{4}$, is not so familiar: It is an FM triad in the key of Em, that is, a major triad on $b\hat{2}$, here presented in first inversion. Because it was used widely (although not "invented") by seventeenth-century opera composers in the Italian city of Naples, it came to be known as the **Neapolitan chord.** More specifically, the chord appears most frequently in first inversion, with a pre-dominant function, as in example 24.1. Hence its usual name of **Neapolitan sixth**, and its frequent label, N_6 . To avoid confusion with the N we have used to label "neighbor chords"; however, we will use the Roman numeral b II (b Π_6 in first inversion) to label the Neapolitan chord.

In the Paradis fragment we can observe some of the characteristics of this chord, which we can summarize as follows:

- 1. Because the Neapolitan chord contains scale degrees \$\frac{2}{-4} \frac{1}{6}\$ (\$\frac{1}{2} \frac{1}{4} \frac{1}{6}\$ in minor), it is chromatic in both major and minor modes (technically, these degrees are diatonic in a Phrygian scale, and for this reason this chord is sometimes called the *Phrygian II*). Because of the presence of the minor-mode 6th degree, however, it belongs more properly to (and is more common in) the minor mode. It may certainly also be used in major, in which case it is a borrowed chord (example 24.2b).
- 2. The chord is most often used in first inversion, with a *pre-dominant function*. Compare the $\[\downarrow II_6 V i \]$ progression in example 24.2a with its very close relatives,

Example 24.1

Maria Theresia von Paradis, Sicilienne, mm. 7-10



iv-V-i and ii $^{\circ}_{6}$ -V-i. Notice that all three progressions feature the bass motion $\hat{4}$ - $\hat{5}$ supporting the pre-dominant/dominant harmonies. In four voices, it is best to *double the bass of ^{\flat}II_{6}* (the third of the chord, $\hat{4}$).

- 3. ♭II₆ is most effective when its characteristic degree, ♭2̂, is in the upper voice. The normative voice leading for ♭2̂ is to descend to 7̂ (through the melodic interval of a diminished 3rd), which then resolves to 1̂. The melodic figure ♭2̂-7̂-1̂ creates a most dramatic tension towards the resolution, 1̂, by means of the upper leading tone, ♭2̂, and the lower leading tone, 7̂. This half-step voice leading toward 1̂ from both above and below is the characteristic trademark of this chord. In example 24.1, you can see the normative ♭2̂-7̂ in the piano's upper voice. Before resolving to 1̂, a change of voicing within the V₇ chord results in a move of 7̂ to an inner voice.
- 4. The V chord after a $\,^{1}$ II₆ may be ornamented, as is usual at cadences, with a cadential $_{4}^{6}$. The progression then becomes $\,^{1}$ II₆-V₄₋₃⁶⁻⁵-I, as in example 24.2c. Notice that the $_{4}^{6}$ chord provides a passing step between $\,^{1}$ 2 and $\,^{2}$ 7. The line now becomes $\,^{1}$ 2 $\,^{2}$ - $\,^{2}$ - $\,^{2}$ - $\,^{2}$ - $\,^{2}$.

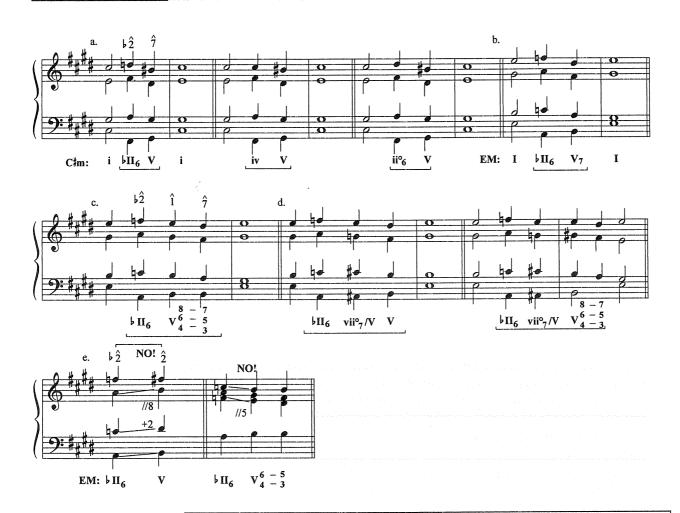
NOTE

Beware that if $\frac{1}{2}$ is in an inner voice, the $\frac{6}{4}$ chord may very easily produce parallel 5ths, as illustrated by example 24.2e. With $\frac{1}{2}$ in the upper voice, the 5ths become correct parallel 4ths.



Study the progressions in example 24.2 for instances of the voice leading we have just explained. As shown in this example, the most common outer-voice framework for the Neapolitan progression includes the double-neighbor motion $\sqrt{2}-\hat{7}-\hat{1}$ (or $\sqrt{2}-\hat{1}-\hat{7}-\hat{1}$ if a cadential $\frac{6}{4}$ is used) over a $\hat{4}-\hat{5}-\hat{1}$ bass. Because the Neapolitan sixth functions most often as a pre-dominant chord, it has a clear role of elaborating the I–V–I progression, as shown in example 24.2. You may also see a "textbook" treatment of $\sqrt{11}$ in Beethoven's fragment reproduced in example 24.3.

♪Example 24.2



Typical Errors to Avoid

- 1. Resolving $b\hat{2}$ to $b\hat{2}$ instead of $\hat{7}$. Besides this being an unusual resolution, it also will easily produce parallel 8ves and a faulty +2 voice leading in the major mode (see example 24.2e).
- 2. Writing parallel 5ths if $\flat \hat{2}$ is in an inner voice and the resolution of $\flat \Pi_6$ to V is done through a cadential 6_4 (see example 24.2e).

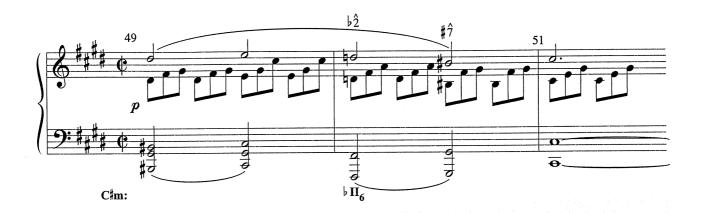


EXERCISE

To practice spelling Neapolitan sixth chords, refer to exercise 2 in worksheet 24 at the end of this chapter.



L. v. Beethoven, Piano Sonata in C#m, op. 27, no. 2, *Moonlight*, I, mm. 49–51



Other Harmonic Contexts for II₆

Example 24.2d illustrates a frequent progression with $\[\Pi_6 \]$, in which $\[vii^\circ_7 / V \]$ is inserted between the Neapolitan and its resolution to V. This progression, as well as the possible cadential $\[^6_4 \]$ elaboration of V, does not affect the basic voice-leading principles we discussed, as you can verify in example 24.2d. In these progressions, the $\[vii^\circ_7 / V \]$ functions as a linear passing chord between the pre-dominant $\[^1_6 \]$ chord and $\[V \]$.

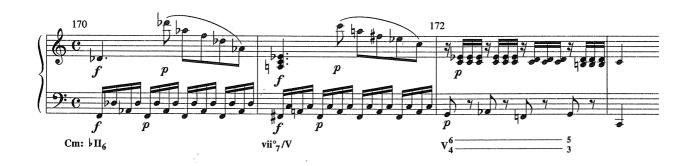
Now study the phrase in example 24.4. You will see in it a standard use of ${}^{\downarrow}\Pi_6$, with a passing vii° ${}_{7}/V$ leading towards the cadential V. This dominant, however, is elaborated by a cadential ${}^{6}_{4}$, which is itself further elaborated or prolonged contrapuntally (m. 172). Discuss this interesting cadential gesture and how it works linearly.

 $hightharpoonup II_6$ may also appear in the context of a succession of parallel 6_3 chords. Analyze anthology, no. 24 (Mozart, Sonata in DM, III, Variation 7), mm. 9–12, in Dm. First, notice the nice textural exchange between voices in mm. 9–10, and the compound melody which makes up one of the lines. Then, analyze the passage with Roman numerals (RNs). In m. 10 you will identify a short sequential fragment, made up of parallel 6_3 chords. Is there a $hightharpoonup III_6$ in the sequence?

Because in the major mode $^{\flat}\Pi_{6}$ is a borrowed chord, it sometimes appears along with other borrowed chords, usually for expressive purposes. The complete text for the passage of the song by Lang reproduced in Example 24.5 is: "It is a wondrous feeling that forever cripples the heart, When we experience our first disappointment—A feeling that we never get over." Our example begins with the words "the heart," in the key of CM. Beginning in m. 63, to the word "disappointment," and continuing from there ("a feeling that we never get over"), the mode of the music changes to minor.

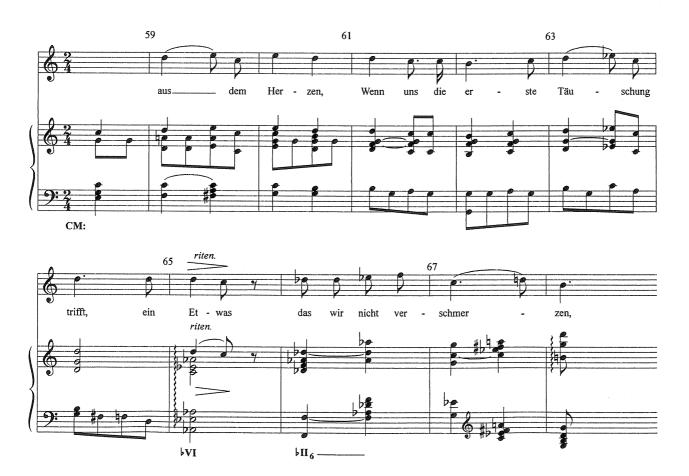
🐊 Example 24.4

W. A. Mozart, Fantasia in Cm, K. 475, mm. 170-173



↓↓ Example 24.5

J. Lang, "Ich gab dem Schicksal dich zurück," m. 59-68



EXERCISE

To practice realizing short progressions including Neapolitan chords, refer to exercise 3 in worksheet 24 at the end of this chapter.



TONICIZATION OF THE NEAPOLITAN

The Neapolitan chord, like any other consonant triad, may be tonicized. The dominant of the Neapolitan is, precisely, \flat VI in major (or VI in minor). Because the resolution of this secondary dominant will usually be to a triad in first inversion (\flat II₆), the dominant appears often in 4_2 position. In example 24.6, in Gm, we hear \flat II₆ in m. 11, but before it moves to V in Gm, in m. 12 we hear its own dominant in third inversion, V_2^4/\flat II, followed again by \flat II₆. The Neapolitan is thus tonicized in m. 12. What are the remaining chords after m. 12? Here again, this passage with several \flat II₆ chords provides a musical setting to words of sadness and longing: "the sun moves in its course, like yours, my sorrows, deep in the heart, always to rise tomorrow." We see again how \flat II₆ is a chord suitable to add intensity to minor-mode expressivity.

THE NEAPOLITAN IN ROOT POSITION

Although the Neapolitan appears most frequently in first inversion, instances of the $\[\downarrow \]$ II chord in root position are also abundant in the literature. *Erlkönig* (anthology, no. 38) is one of Schubert's most famous songs, and perhaps his most touching one. It tells the story of a father riding late at night, holding his child in his arm. Throughout the ride, and the song, the somber king of the elves, the Erlking, is trying to take the boy with him, by lure or by force, to the realm of the spirits. After a long, tense ride in which the poor, scared boy keeps warning his father about the danger, the song ends climactically with the following words: "[The father] reaches home with effort and toil: In his arms the child lay dead!"

Musically, these measures (138–148) are among the most moving in the literature. What chord does Schubert choose to harmonize the arrival to the house, and the subsequent realization that the boy is dead (in mm. 143–146; the key is Gm)? In what position is the chord presented in mm. 143 and 145? What is the intervening chord in m. 144, and what is its function? Does the chord in m. 145 switch to a familiar position? How does it resolve? How does Schubert depict the horse's gallop, and what happens to this depiction after the rider arrives home? How does the texture express the extremely dramatic moment of the last sentence, when the child is found dead? (We will study this complete song in more detail in chapter 30.)

Example 24.6

F. Schubert, "An Mignon," op. 19, no. 2, mm. 9–16

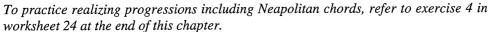


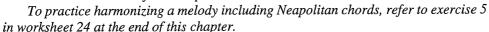
TRITONE SUBSTITUTION: THE NEAPOLITAN AS A SUBSTITUTE FOR V₇

In jazz and popular music, the Neapolitan most often functions as a dominant substitute rather than a pre-dominant. This is indeed the case in example 24.7, where the final tonic chord ($I^{add \, 6}$) is preceded by a Neapolitan (in this case a II^{19} which substitutes for a dominant seventh chord.

Notice that $\flat II_7$ (in CM, $D \flat - F - A \flat - C \flat$) and V_7 (G-B-D-F) have two common tones (B/C \flat and F), whereas $\flat II^{\flat 9}_7$ (D $\flat - F - A \flat - C \flat - E \flat \flat$) and V_7 have three common tones (B/C \flat , D/E $\flat \flat$, and F). Because the roots of V_7 (G) and $\flat II_7$ or $\flat II^{\flat 9}_7$ (D \flat) are a tritone apart, this type of substitution (in which we replace a chord with another chord whose root is a tritone away from the root of the chord being replaced) is known as **tritone substitution.**

EXERCISES

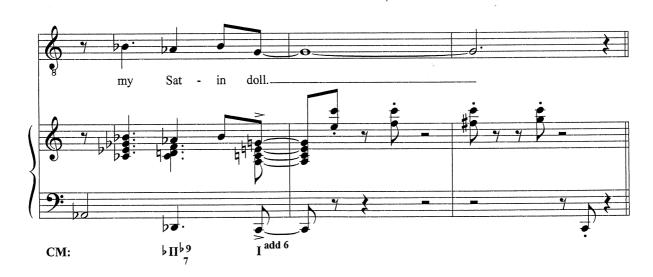




To practice analyzing musical fragments including Neapolitan chords, refer to exercise 1 in worksheet 24 at the end of this chapter.

♣ Example 24.7

D. Ellington-J. Mercer-B. Strayhorn, "Satin Doll" (final cadence)





PRACTICAL APPLICATION AND DISCUSSION

A final example in this chapter on the Neapolitan will summarize a lot of what we have discussed. The passage in example 24.8 is in Dm. How is the Neapolitan used in m. 17? What chord does it move to? What is the progression in

mm. 20–21? You will hear that mm. 20–22 create a strong directed forward motion toward the final resolution to the tonic in m. 23. Explain what the role of the half step is in creating such a powerful linear pull throughout these measures.

♪ Example 24.8

W. A. Mozart, Don Giovanni, Overture, mm. 17–23



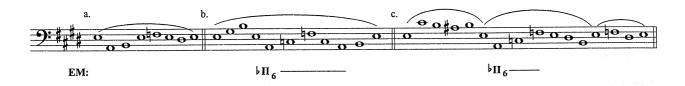
ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 24 in the workbook.

PITCH PATTERNS

Sing the pitch patterns in example 24.9, and as you sing listen to the Neapolitan chord and its resolution. Then *improvise* similar pitch patterns using h Π_6 .

Example 24.9



Terms for Review

Neapolitan chord Neapolitan sixth ($\$ II₆) Tonicization of the ♭II chord Tritone substitution



Worksheet 24

EXERCISE 1 Analysis. Identify the Neapolitan chords in each of the following examples:

- 1. Verify and mark the voice leading of the voice with \$\ddot2\$. Is the \$\ddotII\$ chord in first inversion or root position?
- 2. Provide RNs for the actual II and also for the chords that precede and follow it.
- 3. What chord precedes II? Is the II chord tonicized?
- 4. Does II resolve directly to V? Does it resolve to V through some other harmonies?

Examples for Analysis:

1. Example 24.10

Example 24.10

F. Chopin, Waltz in Am, op. 34, no. 2, mm. 145-152

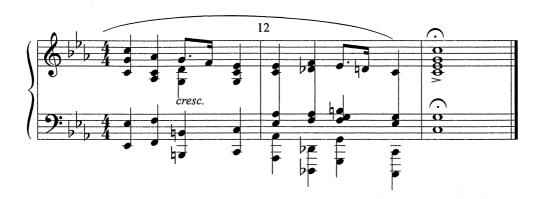


2. Anthology, no. 35, Beethoven, Waldstein Sonata, mm. 132-136

3. Example 24.11

Example 24.11

F. Chopin, Prelude in Cm, op. 28, no. 20, mm. 11-13



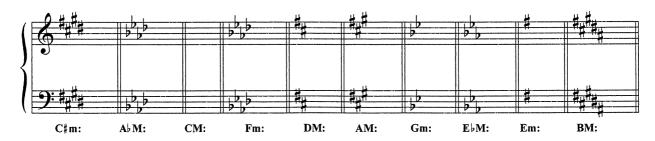
4. Example 24.12

∴ Example 24.12

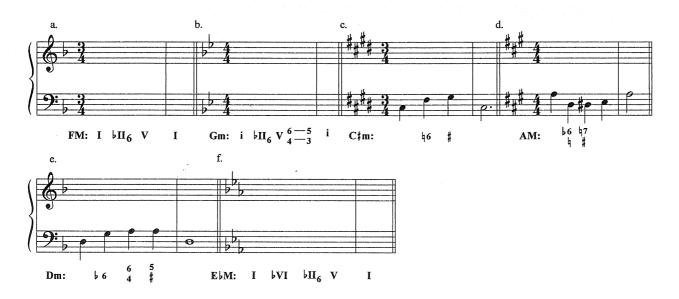
F. Schubert, Symphony no. 9 in Cm, II, mm. 255-259



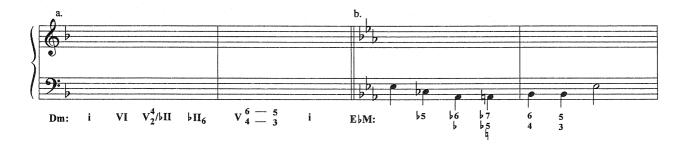
EXERCISE 2 Spell the following $\downarrow II_6$ chords in four voices, in the required keys.



EXERCISE 3 Realize the following short progressions in four voices. Add RNs to the progressions with a figured bass. Be careful with your spelling and resolution of the Neapolitan chords in these progressions.



EXERCISE 4 Realize the following progressions in four voices. Provide a RN analysis for progression b.



EXERCISE 5 Harmonize the following melody (adapted from Bach's Cantata BWV 21, no. 3) with a bass and RNs. In mm. 1–2, the harmonic rhythm is one chord per beat. In m. 3, you will have to adjust the harmonic rhythm to the needs of the melody.

The initial words of this aria's text are: "Seufzer, Tränen, Kummer, Not. Seufzer, Tränen, ängstlich's Sehnen." ("Sighing, tears, suffering, need. Sighing, tears, anguished yearning."). How do the melody and the harmony reflect the mood of the text? Would you say that Bach's use of dissonance in this phrase is also related with the character of the text? How? Can you comment on (and explain) the dissonance in m. 1, beats 1–2?



Chapter 25

Augmented Sixth Chords

In the $\[\downarrow \Pi_6 \]$ chord, the upper and lower leading tones to $\[\hat{1} \]$ are presented melodically. Examine now the short passage by Chevalier de Saint-Georges in example 25.1. The basic harmonic content of mm. 69–70 is a subdominant chord in Cm, which is first tonicized and then prolonged by means of a passing $\[6 \]$ (including the customary voice exchange). In m. 71, beat 4, the $\[\hat{4} \]$ from iv₆ moves chromatically to a passing $\[\# 4 \]$, which continues, of course, to $\[6 \]$ (F–F $\[\# - G \]$). This is happening over a bass $\[6 \]$, which moves down to $\[6 \]$ (A $\[4 \]$). Notice that here we have the two leading tones (upper and lower) to $\[6 \]$, presented simultaneously, or harmonically. The interval between them, from $\[6 \]$ up to $\[4 \]$, is an augmented sixth, +6. Although the process that we have described is linear, this augmented 6th between the two leading tones to $\[6 \]$ generates a very striking family of chords, the augmented-sixth chords.

In this chapter we focus on some types of +6 chords that display a *pre-dominant* function. These are the types most frequently found in eighteenth- and early nineteenth-century music. +6 chords with either a dominant function or functioning as linear embellishments to the tonic can also often be found in nineteenth-century music. We will study these +6 types in chapter 27, in the context of more advanced chromatic harmony.

Like the Neapolitan, the +6 chords with a pre-dominant function belong more properly to the minor mode, because they are constructed above a "minor" degree ($\hat{6}$ in minor, \hat{b} in major; in the following discussion we will refer to this degree as " \hat{b} " regardless of the mode). But, also like the Neapolitan, the +6 chords are used both in minor and major keys. In example 25.2 you can see an example of an +6 chord in a major key, $E \,b\, M$. Measure 38 begins with a IV_6 . Two members of this chord then move chromatically toward $\hat{5}$: The bass, $\hat{6}$, moves to \hat{b} , and on to $\hat{5}$. The middle voice, $\hat{4}$, moves up to $\hat{4}$ and on to $\hat{5}$. These are, again, our two leading tones to $\hat{5}$, both resolving by contrary motion to $\hat{5}$.

∴ Example 25.1

Chevalier de Saint-Georges, Sonata no. 3 for Violin and Piano, mm. 69-72



Example 25.2

Nicolò Paganini, Caprice op. 1, no. 14 for Solo Violin, mm. 35-39

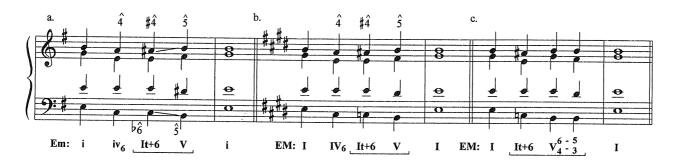


GENERAL FEATURES AND TYPES OF +6 CHORDS

In both examples 25.1 and 25.2 we can observe some common features of pre-dominant +6 chords:

- 1. +6 chords may appear both in major or in minor keys.
- 2. The basic framework for all pre-dominant +6 chords is the +6 interval between 6 and 4. 6 is normally in the bass.
- 3. The +6 chord includes at least one more pitch, and, as we can see in both of the preceding examples, this pitch is 1 (a M3 above the bass's \$\display6).
- 4. The +6 chord resolves to V or V_7 . It may do so directly (as in example 25.1), or through the cadential $\frac{6}{4}$ (as in example 25.2).
- 5. In either case, both \hat{b} and \hat{a} resolve to \hat{b} by contrary motion.
- 6. This simultaneous double leading-tone tendency toward 5 creates a strong tension in this chord, a directed motion toward V, which gives it its typical *pre-dominant* function, as well as a highly dramatic character.

Example 25.3





7. The +6 chord is often, although not always, approached from IV₆ (or iv₆). In major, it is sometimes preceded by a borrowed chord, such as iv₆ or VI, both of which introduce \(\hat{6} \) in the bass.

Example 25.3 summarizes the standard voice leading and function for the type of +6 chord illustrated so far. The +6 chord made up of only three different pitches $(\hat{-6}-\hat{1}-\hat{4})$ is known as the *Italian* +6 (It +6). In four voices, $\hat{1}$ should be doubled. Examples 25.3a to d show characteristic resolutions of the It +6 to V, V_{4-3}^{6-5} , and V_7 . You will see that in the resolution of the +6 chord to V_7 , $\hat{4}$ does not move up to $\hat{5}$, but rather down to the seventh of V_7 , $\hat{4}$.

Spelling +6 Chords

The following steps will guide you through the process of spelling +6 chords. You can use example 25.3e as a visual reference.

- 1. We will build all +6 chords on \(\bar{6} \), which we place in the bass. \(\bar{6} \) in the key of E (both EM and Em) is pitch C.
- 2. Notate #4 in one of the upper voices. #4 in E (M or m) is A#. The \$6-#4 interval (C-A# in our example) constitutes the +6 interval common to all types of +6 chords.
- 3. The It +6 has only one more pitch besides \(\hat{6} \) and \(\frac{1}{4} \): \(\hat{1} \), the pitch a M3 above \(\hat{6} \)
 (E in both EM and Em). This is the pitch we will double in four voices.
- 4. The Gr +6 has one more pitch besides the three pitches of the It +6: $\frac{1}{2}$, the pitch a P5 above $\frac{1}{2}$ 6 (G $\frac{1}{2}$ in our example).
- 5. The Fr +6 has one more pitch besides the three pitches of the It +6: $\hat{2}$, the pitch a +4 above $\hat{6}$ (F# in our example).

THE ITALIAN +6

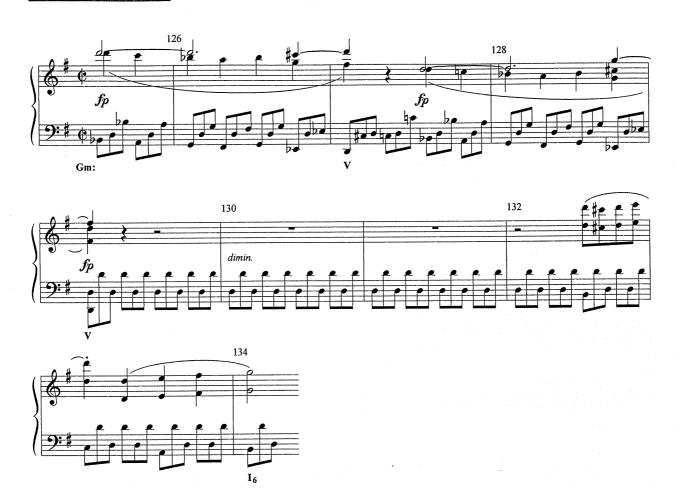
Example 25.3 summarizes the characteristics of the **It** +6 (figured bass: +6 or #6): It contains three different pitches $(\frac{1}{6}-\hat{1}-\frac{4}{4})$, and $\hat{1}$ is doubled in four voices. We referred to the dramatic power of the +6. The chord has indeed often been used for two purposes: to signal the arrival of an important structural cadential point or a point of formal articulation, and, in vocal music, to mark dramatically intense moments when the text so requires. An illustration of the latter appears in example 25.4, from Mozart's opera Don Giovanni. Donna Elvira is still in love with Don Giovanni, even after being betrayed by this libertine womanizer. In our example, she is begging him to change his life, over an embellished I chord in FM which turns out to be a pivot for a modulation to B\M. Notice that the pivot and the "change" of tonal center come not only at the word "cangi" ("change"), but moreover introduce a sharp change of tone in the dialogue between the two characters: Don Giovanni now responds, with cold sarcasm, "Brava!" (meaning, "Yes, sure!"), and Donna Elvira's painful answer to his coldness is "Cor perfido!," "wicked heart!" How is her cry of suffering and heartbreak stressed musically, in mm. 10-11 of our example and twice again in the following measures? How is the harmonic and linear tension in m. 10 supported by such factors as texture and dynamics?

We find many examples of the +6 chord used as a marker for formal articulation in the music of Beethoven. Example 25.5 reproduces a fragment from a rondo by this composer. The form of a rondo is based on the alternation of a refrain, which always returns in the tonic key, and episodes that may present new material or develop the material from the refrain (in a formal scheme such as A-B-A-C-A-D-A). In example 25.5 we see the measures leading from the end of the C section, a developmental episode, into the return of the A material at m. 132. The dominant chord in this passage (reached in m. 129 and anticipated in m. 127) has a structural function within the overall form: to take us back to the return of the home key. What chord does Beethoven use to precede the arrival of the dominant in both of these measures?



♪ Example 25.5

L. v. Beethoven, Piano Sonata in GM, op. 31 no. 1, III, mm. 126-34



EXERCISES

To practice spelling Italian +6 chords, refer to exercise 2.1 in worksheet 25 at the end of this chapter.



To practice realizing short progressions including Italian +6 chords, refer to exercises 3a to d in worksheet 25 at the end of this chapter.

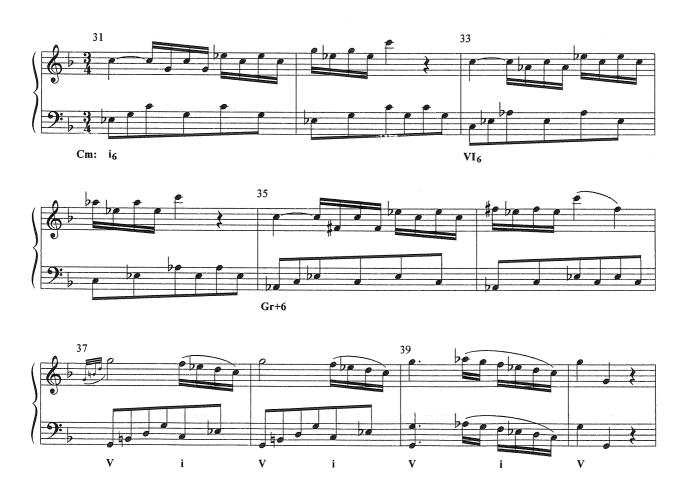
THE GERMAN +6

As we saw in example 25.3e, the **German +6** chord (figured bass: $^{+6}_{5}$ or $^{+6}_{5}$) includes four different pitches, $\frac{1}{5} - \frac{1}{5} - \frac{1}{5} + \frac{1}{5}$

is, a V_7 type of sonority) on $\ \hat{b}$, only that the seventh of the chord is spelled as an +6th. In example 25.6a we can see the Gr +6 in its conventional function as a pre-dominant chord, in this case preceded by $\ VI$. Notice also that the Gr +6 (mm. 35–36) leads directly to V, and that Mozart's voice leading includes clear parallel 5ths. In fact, the parallel 5ths between the Gr +6 and V are not only permissible, but frequently found in the literature. There are several reasons why these parallel 5ths are permissible. In the first place, and as we can see in the Mozart example, the 5ths are not so evident if they appear, as they most often do, in the context of arpeggiated chords (that is, not presented as harmonic intervals) rather than in block chords or chorale textures. Moreover, we hear the +6 chord as a dissonant chord, and our attention is drawn to the linear resolution of the +6 interval (the dissonance) rather than to the parallel 5ths, especially if the +6 is placed in the outer voices and the 5ths involve an inner voice. In any case, these are the only parallel fifths in tonal harmonic theory in which you can indulge—and which you can enjoy without fear of being corrected!

🖒 Example 25.6a

W. A. Mozart, Piano Sonata in FM, K. 332, I, mm. 31-40



Example 25.6b

W. A. Mozart, Don Giovanni, Overture, mm. 10-13



Very often, however, composers "hide" the parallel 5ths by means of an intervening cadential 6 . This is the case in another Mozart example from *Don Giovanni* (example 25.6b). Can you find the parallel 5ths Mozart avoids by moving the Gr +6 to V (mm. 10–11) through a cadential 6 ? The conventional voice-leading possibilities for the Gr +6 are summarized in examples 25.15a and b.

Don Giovanni also affords good examples of the dramatic use of the Gr +6. Early in the opera, Don Giovanni kills the Commendatore in a fight, after having betrayed the latter's daughter, Donna Anna. Toward the end of the opera, in a defiant gesture, Don Giovanni invites the statue of the Commendatore to supper. As Donna Elvira, after her unsuccessful bid to change Don Giovanni's life, opens the door to leave, she runs into none other than . . . the statue coming for dinner! This passage in the opera, reproduced in example 25.7, illustrates the dramatic use of modulation, of the vii°, chord, and of the Gr +6 chord. The passage begins in BbM, as Donna Elvira goes to the door. Her scream of terror ("Ah!") is marked by a secondary vii°, chord, vii°,/ii. As it turns out, this vii°, chord actually functions as a chromatic pivot in a modulation up a step, to Cm, underscoring the heightening tension of Don Giovanni's words, "A scream, what can have happened?" Finally, the third statement of this questioning sentence is further stressed in m. 10 by a Gr +6 chord. Notice that in this case Mozart moves this chord directly to a V chord. How does he avoid the usual parallel 5ths?

Because the Gr +6 contains three common tones with \flat VI, it is often approached from that chord. The Haydn passage in example 25.8 is in GM. In m. 239 we hear a powerful deceptive cadence to a borrowed \flat VI, which is prolonged and tonicized for eight measures, until it becomes a Gr +6 by the simple addition of \sharp 4 to the \flat VI triad. Here again, Haydn avoids the parallel 5ths in the same way Mozart did in example 25.7. How?

EXERCISES

To practice spelling German +6 chords, refer to exercise 2.2 in worksheet 25 at the end of this chapter.

To practice realizing short progressions including German +6 chords, refer to exercises 3e to h in worksheet 25 at the end of this chapter.



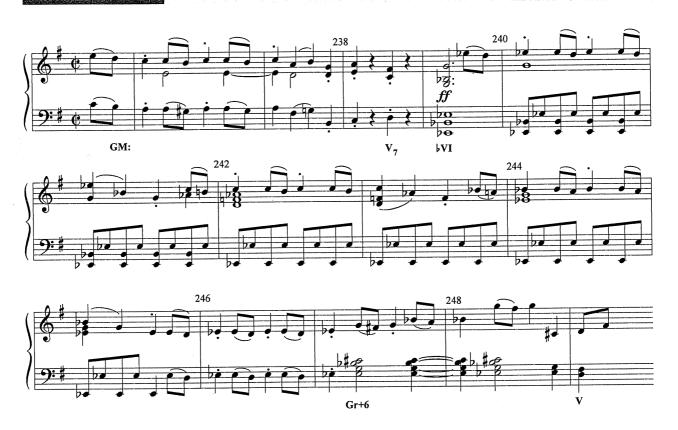
♪♪ Example 25.7

W. A. Mozart, Don Giovanni, Finale



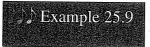
, Example 25.8

J. Haydn, Symphony no. 100 in GM, Military, I, mm. 236-49



Alternative Spelling of the Gr + 6: The Doubly Augmented Fourth Chord

Example 25.9 shows the beginning measures of a song by Schumann, in B\hM. You will notice two unusual things. First, the song begins with a Gr +6 chord, an unconventional chord to begin a piece with, to be sure. Second, this chord is spelled $\hbar\hat{c}-\hat{1}-\#\hat{2}-\#\hat{4}$ instead of the more familiar $\hbar\hat{c}-\hat{1}-\#\hat{3}-\#\hat{4}$. In other words, $\hbar\hat{3}$ has been replaced by its enharmonic spelling, $\#\hat{2}$. The reason is mostly of visual voice—leading logic: in major keys, when the Gr +6 moves to a cadential $\hbar\hat{4}$, one voice carries the voice leading $\hbar\hat{3}-\#\hat{3}-\hat{2}$. Sometimes composers use an alternative notation for this line, one that seems to reflect more logically the ascent from $\hbar\hat{3}$ to $\hbar\hat{3}: \#\hat{2}-\hbar\hat{3}$; hence the enharmonic spelling of $\hbar\hat{3}$ in example 25.9. Verify this same alternative spelling in example 25.15c. Because of the doubly augmented 4th interval that this enharmonic spelling creates ($\hbar\hat{6}-\#\hat{2}$), this chord is usually referred to as the **doubly augmented fourth chord.**



R. Schumann, "Am leuchtenden Sommermorgen," from *Dichterliebe*, op. 48, mm. 1–4



B♭M: Gr+6!



EXERCISES

To practice spelling doubly +4th chords, refer to exercise 2.3 in worksheet 25 at the end of this chapter.

To practice realizing short progressions including doubly +4th chords, refer to exercises 3i and j in worksheet 25 at the end of this chapter.

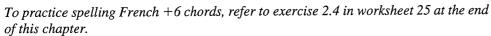
THE FRENCH +6

The most peculiar and dissonant of the +6 chords is known as the **French** +6 (figured bass: $\frac{1}{4}$ or $\frac{1}{4}$). The fourth pitch in this chord, added to the basic frame of the It +6, is $\hat{2}$. The total sonority, $\hat{b}\hat{6}-\hat{1}-\hat{2}-\hat{\sharp}\hat{4}$, includes two overlapping tritones and a major 2nd, besides the +6th. The function of this chord, as well as its resolution to V or to the cadential $\frac{6}{4}$, are the same as in the other two types of +6 chord. Example 25.10 illustrates Beethoven's use of this chord at a point of great formal significance—the beginning of the second theme (and the secondary key area, in the dominant key) in the first movement of the *Eroica* Symphony. The secondary key area begins in m. 45 on V of the dominant key, BbM, approached from a Fr +6 in m. 44. Verify the pitches and spelling of this chord, as well as its voice-leading resolution to V in BbM. Hear the powerful tension created by this dissonant sonority, so well used by Beethoven as a formal marker in this passage. The phrase by Celeste Heckscher in example 25.11, on the other hand, illustrates the resolution of a Fr +6 to a cadential $\frac{6}{4}$. Identify the chord, and double-check its spelling and voice leading.

L. v. Beethoven, Symphony no. 3, op. 55, Eroica, mm. 37-49



EXERCISES



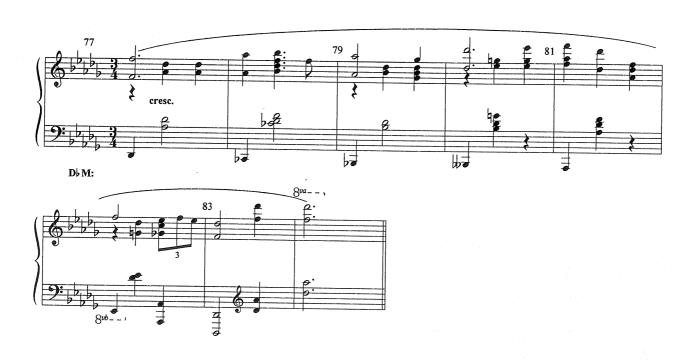
To practice realizing short progressions including French +6 chords, refer to exercises 3k to n in worksheet 25 at the end of this chapter.

OTHER TYPES OF +6 CHORDS

Although the three characteristic types of +6 chords that we previously discussed usually appear individually, at times all three types are lumped into a "moving" +6 chord, such as the one shown in example 25.12. The chord in m. 41, beat 3, begins as a Gr +6. But because of the moving viola line (the sixteenth-note figure), it immediately becomes

Example 25.11

Celeste Heckscher, Valse Bohème, mm. 77-84



Example 25.12

J. Haydn, Quartet in BbM, op. 64, no. 3, I, mm. 39-42

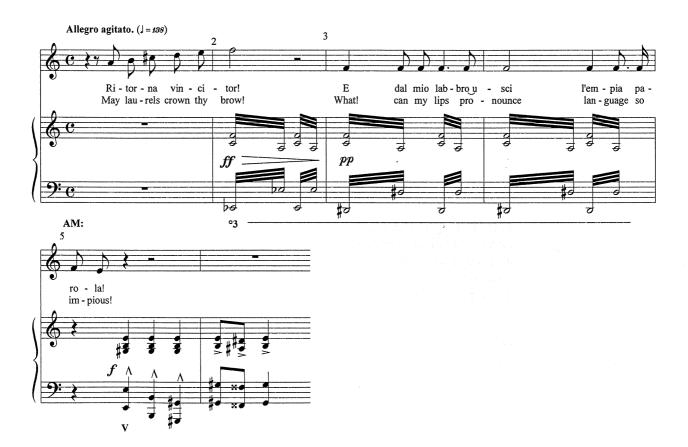


a Fr +6, and then an It +6, before it resolves to V in Fm. Because this type of moving +6 chord includes all three "nationalities," we could appropriately call it the "European Union +6 chord"!

The Diminished Third (°3) Chord

Example 25.13

G. Verdi, Aida, "Ritorna vincitor," mm. 1-6



Example 25.14

R. Schumann, *Papillons*, op. 2, no. 8, mm. 21–32





EXERCISES

To practice spelling diminished 3rd chords, refer to exercise 2.5 in worksheet 25 at the end of this chapter.

Secondary +6 Chords

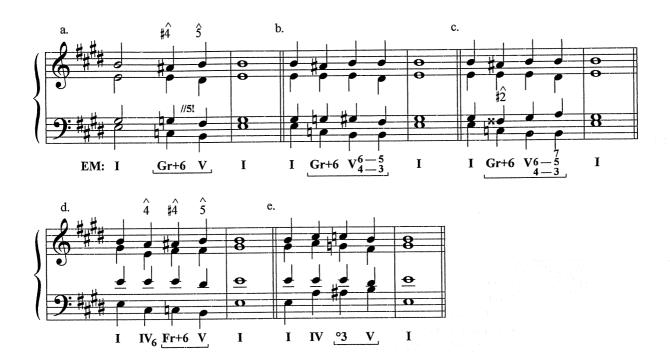
All the +6 chords we have seen so far function as pre-dominant chords to the primary dominant, V. Secondary dominants, however, may also be preceded by their own secondary +6 chord, an event that is often part of a secondary key area. Example 25.14 is in DbM, as indicated by the two initial chords, the cadence in m. 25, and the final cadence. In mm. 22-23 we hear a brief secondary key area of vi, closing with a V/vi in m. 24. The two chords that precede this V/vi (m. 23, beats 2-3) are examples of secondary +6 chords (of which type?). Complete the Roman numeral analysis of m. 22 to m. 24, beat 1, using the secondary-key area notation already started on the example.

SUMMARY

Example 25.15 provides a summary of spelling and voice leading for the Gr + 6, Fr + 6, and °3 chords. Study these carefully, and play these examples at the piano to learn the characteristic sound of these interesting chromatic chords.

Examples 25.3 and 25.15 show that the most effective outer-voice frame for the +6 progression includes the linear motions $\sharp \hat{4}-\hat{5}$ (or $\hat{4}-\sharp \hat{4}-\hat{5}$) in the soprano and $\flat \hat{6}-\hat{5}$

A Example 25.15



in the bass. As in the case of the Neapolitan sixth, the +6 chord functions most often as a pre-dominant, and hence it has a clear role in the elaboration of the I–V–I progression, as shown in examples 25.3 and 25.15. In cases where another pre-dominant chord precedes it (usually iv₆ or IV₆, as in examples 25.3a and b or 25.15d), the +6 functions as a chromatic passing chord between the previous pre-dominant and the following dominant (that is, it functions as a chromatic elaboration of the pre-dominant).

TONAL RELATIONSHIP BETWEEN THE NEAPOLITAN AND THE +6 CHORDS

As we saw in chapter 24, the dominant of the Neapolitan chord is the $\$ VI triad. We have also seen that the sonority of the Gr +6 chord is the same as a Mm₇ sonority on $\$ 6. In other words, the dominant seventh of the Neapolitan, V₇/ $\$ II, and the Gr +6 are the same sonority, although spelled differently. Example 25.16 shows the relationship between the two chords. As you can imagine, this opens up some interesting possibilities. If the Gr +6 and \(\beta \)II are connected by a dominant/tonic relationship, couldn't we use the Gr +6 respelled as V₇/ $\$ III to modulate to such a distant key as the Neapolitan key (say, from Cm to C\(\mathref{T} \)m or to C\(\mathref{T} \)M)? This is indeed one of the distant modulations that we will study in the next chapter.

Example 25.16





EXERCISES

To practice realizing progressions including +6 chords, refer to exercise 4 in worksheet 25 at the end of this chapter.

To practice harmonizing a melody including +6 chords, refer to exercise 5 in worksheet 25 at the end of this chapter.

To practice analyzing musical fragments including +6 chords, refer to exercise 1 in worksheet 25 at the end of this chapter.

FOR FURTHER STUDY

For additional analysis using materials studied in this chapter, refer to the *Harmony in Context* Web page at www.mhhe.com /roigfrancoli2e.

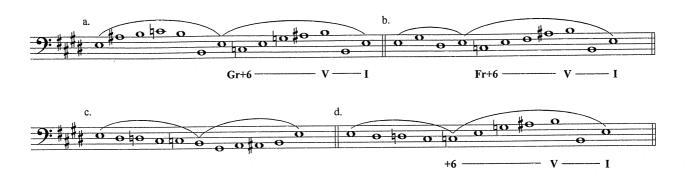
ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 25 in the workbook.

PITCH PATTERNS

Sing the pitch patterns in example 25.17, and as you sing listen to the +6 chords and their resolution. Then, *improvise* similar pitch patterns using linearized +6 chords.

🔝 Example 25.17



Terms for Review

Augmented sixth (+6) chords

It +6

Gr +6

Alternative spelling of the Gr +6 (the doubly augmented fourth chord)

Fr + 6

"moving" +6

°3 chord

Secondary +6 chords



Worksheet 25

EXERCISE 1 Analysis. Identify the +6 chords in each of the following examples.

- 1. Identify the type of +6 chord ("nationality"). If it is a Gr +6, is it spelled with a $\downarrow \hat{3}$ or a $\sharp \hat{2}$?
- 2. Provide RNs for the actual +6 chord and also for the chords that precede and follow it.
- 3. Does the +6 chord resolve directly to V? Does it resolve to V through some other harmonies? Are parallel 5ths avoided?

Examples for Analysis:

1. Example 25.18

Example 25.18

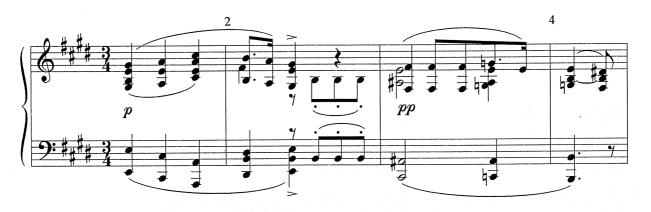
W. A. Mozart, Sonata for Violin and Piano, K. 380, III, mm. 101-108



2. Example 25.19

Example 25.19

J. Brahms, Symphony no. 1 in Cm, II, mm. 1-4



3. Example 25.20

Example 25.20

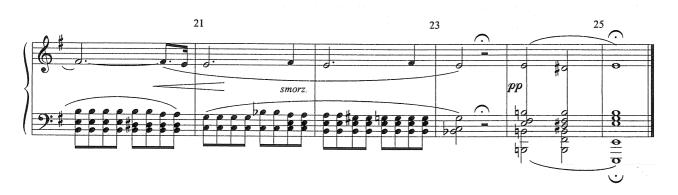
W. A. Mozart, Piano Sonata in FM, K. 280, II, mm. 9-14



- 4. Anthology, no. 24, Mozart, Sonata in DM, III, Var. 7, mm. 3-4, 5-8, and 14-17
- 5. Anthology, no. 34, Beethoven, Sonata op. 13, *Pathétique*, III, mm. 6–7, 44–47, 131–135, and 182–186
- 6. Example 25.21

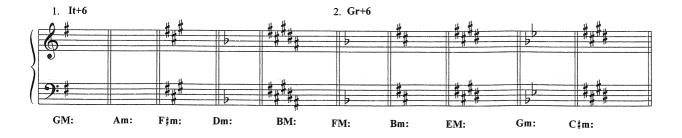
Example 25.21

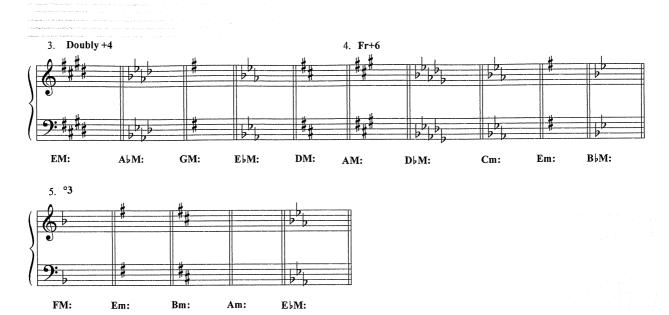
F. Chopin, Prelude in Em, op. 28, no. 4, mm. 20-25



EXERCISE 2 Spell the following chords in four voices, in the required keys:

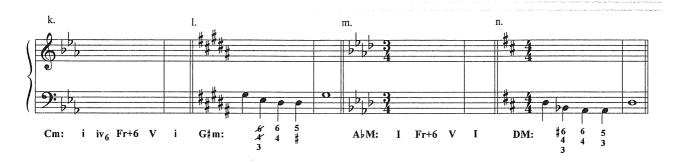
- 1. Italian +6 chords
- 2. German +6 chords
- 3. Doubly augmented 4th chords
- 4. French +6 chords
- 5. Diminished 3rd chords



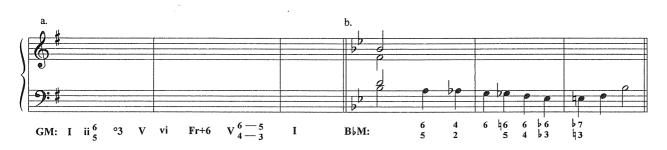


EXERCISE 3 Realize the following short progressions in four voices. Add RNs to the progressions with a figured bass. Be careful with your spelling and resolution of the +6 chords in these progressions.





EXERCISE 4 Realize the following progressions in four voices. Provide a RN analysis for progression b.



EXERCISE 5 Harmonize the following melody with a bass and RNs. Use an +6 chord where appropriate.



Chapter 26

Chromatic Modulatory Techniques: Modulation to Distantly Related Keys I

In this chapter we continue our study of modulation, focusing on techniques that allow tonal motion to distantly related keys. **Distantly related keys** are keys whose signatures differ in more than one accidental. Any two keys that are not closely related are distantly related, although the distance can be smaller or greater (for instance, CM and DM, with a difference of only two sharps, are not as distantly related as CM and C \sharp M, with a difference of seven sharps, or CM and F \sharp M, with a difference of six sharps). In this chapter we first study three types of modulation to distantly related keys: by *chromatic pivot chord*, by *enharmonic reinterpretation of the* +6 *chord*, and by *enharmonic reinterpretation of vii* $^{\circ}$ 7.

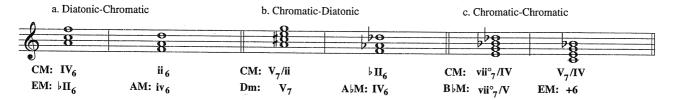
CHROMATIC PIVOT CHORDS

In chapter 20 we studied modulation by means of diatonic pivot chords, which we defined as chords that have a diatonic function in both of the keys for which they act as a connection. We also introduced **chromatic pivot chords**, chords that are not diatonic in at least one of the keys involved in the modulation. In this section we will further our study of chromatic pivot relationships, including those that allow modulations to distantly related keys.

Example 26.1 illustrates a few possible **chromatic pivot relationships** from CM to several other keys. Notice that the second key in this type of modulation may be closely or distantly related. Notice also that the pivot chord may be of three types, depending on whether it is chromatic in the first key, in the second key, or in both:

- 1. In the first type, **diatonic-chromatic**, the chord is diatonic in the first key and chromatic in the second. Both examples for this type (example 26.1a) involve borrowed chords in the second key, including a $heta \Pi_6$.
- 2. The second type, **chromatic-diatonic**, features chords that are chromatic in the first key and diatonic in the second. A frequent example for this type features a secondary dominant in the first key, which becomes the diatonic dominant of the second key (example 26.1b). In our second example, Π_6 (a chromatic chord) becomes a diatonic Π_6 in the new key.

Example 26.1



3. In the third type, **chromatic-chromatic**, the chord is chromatic in both keys. In example 26.1c, a secondary vii^o₇ in the first key also becomes a secondary vii^o₇ in the second key, and in the second example a secondary dominant in the first key becomes the Gr +6 chord in the second key. (This latter example takes advantage

Example 26.2

W. A. Mozart, Die Entführung aus dem Serail, act III, no. 18, mm. 11-17



of the fact that the Gr+6 sonority is the same as a Mm_7 sonority, but it involves an enharmonic respelling of the chord. Try it: How would you spell V_7/IV in CM, and how would you spell the same sonority but now functioning as the Gr+6 in EM? We will study enharmonic reinterpretation of the Gr+6 in more detail below.)

EXERCISE

To practice determining the chromatic pivot function of a chord between two keys, refer to exercise 2 in worksheet 26 at the end of this chapter.



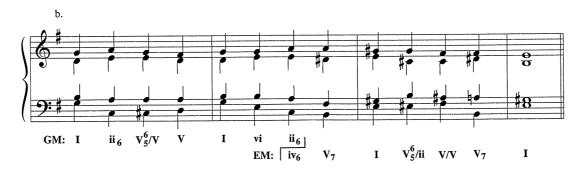
The Diatonic-Chromatic Pivot Relationship

Chapter 26

In example 26.2, taken from Mozart's *The Abduction from the Seraglio*, Pedrillo tells the story of the Spanish lady Kostanze, of whom he is a servant, and who has been the captive of a Moorish ruler. The beginning of our example, in which we learn that Kostanze has been sighing in despair day and night, is in GM. The second sentence refers to the lady's longing for freedom, and this allusion to the liberation that would allow her to return to her distant homeland comes with a modulation to the distantly related keys of F#m/F#M. Connecting both keys (G and F#) is a chromatic pivot chord, the GM triad in first inversion, which is diatonic in GM (I_6) and chromatic in F# (I_6). Two progressions illustrating the *diatonic-chromatic* pivot relationship appear in example 26.3. Play these

Example 26.3





progressions, sing them in class, and hear the modulation and the pivot chord function in both keys.

The Chromatic-Diatonic Pivot Relationship

This chromatic pivot relationship between two keys is beautifully illustrated by the Brahms passage reproduced in example 26.4, although the keys involved here are not distantly related (Fm and D $_{\rm h}$ M, or i–VI). When you analyze the harmonies in mm. 25–32 you will see that the passage is based on a standard diatonic progression in Fm (i–VI–iv–V) which has been slightly elaborated: The V in m. 29 is extended by means of a deceptive resolution, and then it is tonicized before reaching the half cadence (HC) in m. 32. The pre-dominant iv in m. 27 is itself prolonged by means of the $_{\rm h}$ II6 chord in m. 28. In Fm, $_{\rm h}$ II6 is, of course, chromatic. Now refer to the progression after the HC (mm. 33–38). It begins with the same chord that we just heard in m. 28 ($_{\rm h}$ II6 in Fm), but now it moves on to the dominant of D $_{\rm h}$ M, which eventually resolves to the tonic of the new key (in first inversion, m. 38). In D $_{\rm h}$ M, the G $_{\rm h}$ M triad in m. 33 is a diatonic chord, IV6. In other words, this is a *chromatic-diatonic* pivot that has taken us from Fm to D $_{\rm h}$ M.

Modulations are sometimes achieved by the introduction of the new dominant, which we first hear as a secondary dominant. The Beethoven passage in example 26.5 begins with a cadence in AbM. In the context of this key, we hear mm. 29–30 as a tonicization of vi; that is, we hear the CM chord in m. 29 as a secondary dominant of vi (hence as a chromatic chord in AbM). As the music goes on, we realize that we are modulating to Fm. The CM chord in m. 29 is, then, chromatic in AbM and diatonic in Fm. This is a case of a chromatic-diatonic relationship in the form of the dominant of the new key first heard as a tonicizing secondary dominant in the old key.

The two progressions in example 26.6 summarize the two types of chromatic-diatonic pivot relationship we just studied.

The Chromatic-Chromatic Pivot Relationship

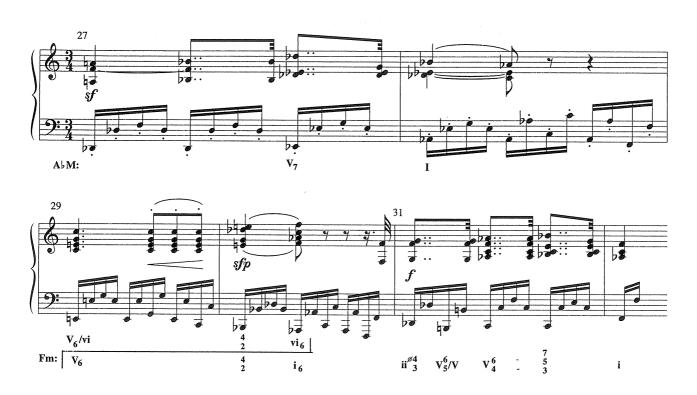
In this type of pivot relationship, the pivot chord is chromatic in both keys. A frequent type of chromatic-chromatic pivot features a chord with a secondary function in both keys. Refer to anthology, no. 32 (Beethoven, Sonata in Fm, op. 2 no. 1), mm 49–57. The passage begins in Al-M and ends in Bl-m. The chord in m. 53 is a secondary viio /6/vi in Al-M, which leads not to vi (an Fm triad) but rather to V in Bl-m (an FM triad) in m. 55. Our viio /6/vi in Al-M is thus also a viio /6/V in Bl-m, hence it is a secondary chord in both keys, a *chromatic-chromatic* pivot chord. You may have remarked that the resolution from the viio /6/V in m. 53 to the V in m. 55 is effected through a passing chord in m. 54 (notice the chromatic linear motion in the bass, G-Gl-F). What is the chord in m. 54 that results from this chromatic passing motion? Study example 26.7a, a summary of the modulating progression we have just discussed. Play and sing the progression, and understand the chromatic-chromatic function of the pivot chord.

J. Brahms, Sonata in Fm for Clarinet and Piano, op. 120, no. 1, I, mm. 25-38



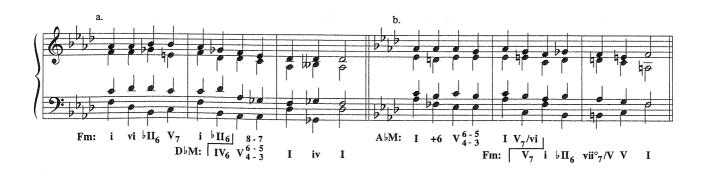
Example 26.5

L. v. Beethoven, Piano Sonata op. 7 in EbM, II, mm. 27–32

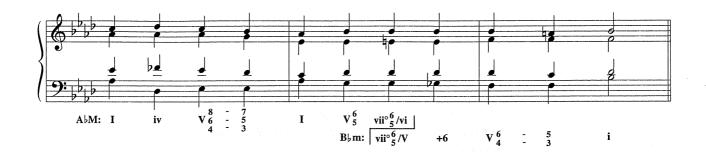


Example 26.7b illustrates the use of a chromatic-chromatic pivot chord to modulate between two closely related keys, CM and GM. Although one could argue that the dominant in this example's m. 4 could be interpreted as a diatonic pivot chord (I in GM), in this measure we do not hear this GM chord as a tonic at all, but only as V of CM. Then, we hear the following EM seventh chord as V_7/v_1

♪ Example 26.6

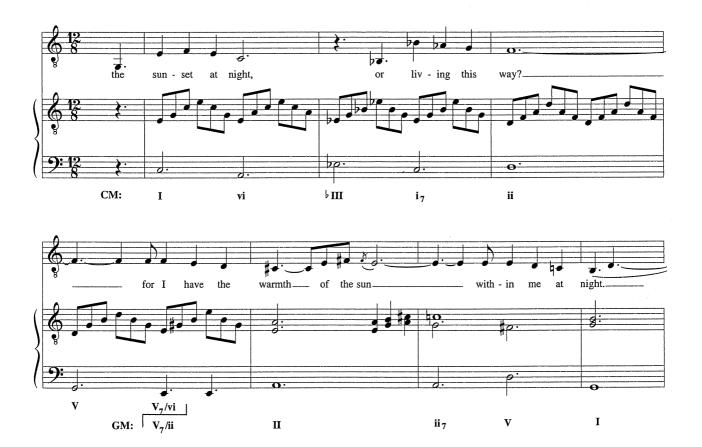


Example 26.7a



Example 26.7b

Mike Love-Brian Wilson (The Beach Boys), "The Warmth of the Sun"



in CM. But by m. 6 we realize that we are moving to GM, and that the V_7/vi was actually a V_7/ii tonicizing a pre-dominant chord in GM. This secondary chord, chromatic in both keys, is then the actual pivot (a chromatic-chromatic pivot) between the two keys. Comment also on the use of borrowed chords in this passage. How many of them are there?

WRITING CHROMATIC PIVOT CHORD MODULATIONS

The process of writing a modulation involving a chromatic pivot chord is similar to the process we learned in chapter 20 of writing modulations using diatonic pivot chords.

- 1. You may first determine the keys you will use in your modulation, and then investigate possible chromatic pivot chords. For instance, if you want to modulate from FM to EM, you may take advantage of the fact that I in FM is the Neapolitan chord in EM, and thus you can use the diatonic-chromatic pivot FM: I₆/EM: II₆.
- 2. Or you may want to use a specific pivot relationship (say, $\[\]$ in the first key) to modulate to some other key. Then you will investigate possible keys you can go to by means of that pivot. $\[\]$ in FM, for instance, can become IV₆ in D\[\]M, or V₆ in BM (try all these possibilities at the piano or on paper).
- 3. We will now write several progressions using some of these procedures. First, let us write a *diatonic-chromatic* pivot modulation from FM to EM. We would like our pivot chord to be a borrowed chord in the second key, EM. What diatonic chords in FM can function as borrowed chords in EM? iii in F becomes iv in E, and V in F becomes bVI in E. Because V of the old key is not the best possible pivot, we will choose iii/iv as a diatonic-chromatic pivot. Now we need to write a good progression in each of the keys, and connect the two progressions by means of our chosen pivot. Example 26.8 shows a possible realization of this modulation.

Now try writing your own modulating progression using a diatonic-chromatic pivot. Choose your first key, and write a modulation in which some diatonic major triad in the first key becomes ${}^{\downarrow}\Pi_{6}$ in the second key.

Example 26.8



⇒ Example 26.9



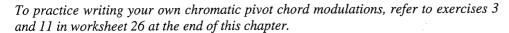
4. Next, we will write some modulations using a chromatic-diatonic pivot. First, we want to write a modulation from DM using a borrowed chord in the first key, for instance, iv or iv₀, the Gm triad. The Gm triad can be found as a diatonic chord in quite a few keys (for instance, it is i in Gm, ii in FM, iii in E♭M, etc.). Because DM and FM are distantly related keys, and iv in DM is a pre-dominant chord in FM (ii, a good pivot), we choose FM as our second key. Then we try to write two interesting progressions in DM and FM, and connect them with the iv₀/ii₀ chromatic-diatonic pivot that we previously determined. Example 26.9 shows a possible solution for this modulation.

Write now two modulations with chromatic-diatonic pivots. In the first modulation, begin in CM, and use as the pivot ${}^{\downarrow}\Pi_6$ in CM, which will become V₆ in the new key. What key does this pivot take us to? Notice that this is an interesting distant modulation. What is the Roman numeral (RN) relationship between these two keys?

For your second modulation, begin from a major key and modulate to the VII key using the dominant of the new key first as a secondary dominant in the old key.

5. Finally, write your own modulation using a chromatic-chromatic pivot. As a suggestion, try beginning in AlM and use vii°7/iii in the first key as your pivot. How can you go to FM using this chord as a chromatic-chromatic pivot?

EXERCISES

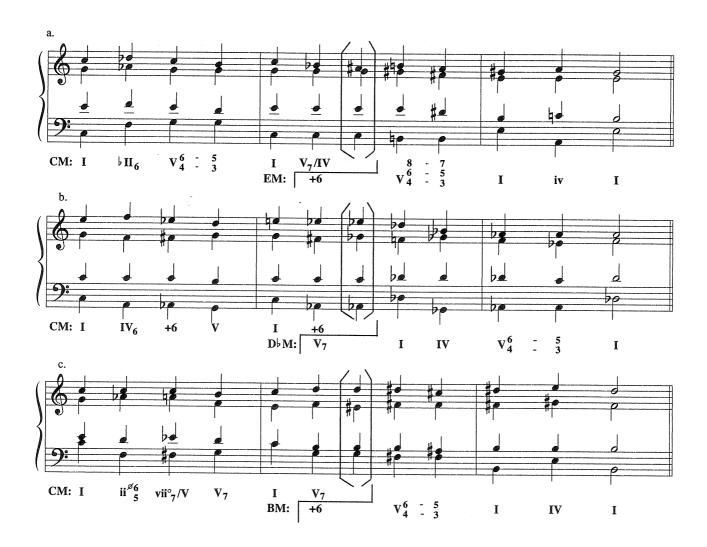




MODULATION BY ENHARMONIC REINTERPRETATION OF THE GR +6

This interesting chromatic modulation takes advantage of the fact that the Gr+6 features the same sonority as a Mm_7 chord. Hence, a Gr+6 may be reinterpreted as a V_7 chord in a different key or, vice versa, a V_7 chord may be reinterpreted as a Gr+6. In both cases, the chord needs to be respelled enharmonically, even if it's only mentally (composers do not provide both spellings in actual music, although we will in most of our examples and exercises, to clarify the process as much as possible; the spelling in

Example 26.10



the second key will always be provided in brackets after the spelling in the first key). Example 26.10 shows you the most frequent pivot and key relationships using this type of reinterpretation. Essentially, they can be reduced to two types:

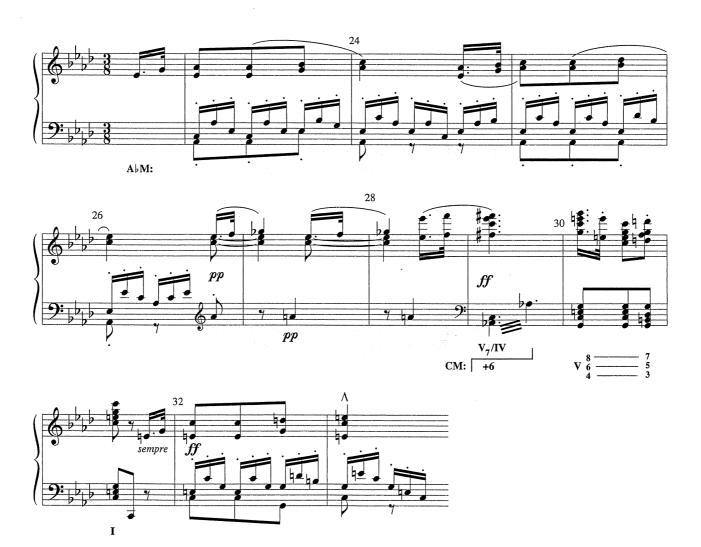
- 1. In example 26.10a, a V₇/IV in a major key is reinterpreted as a Gr +6 of a key a M3 above the original key (iii or III) by respelling Bb as A#.
- 2. In example 26.10b, the Gr +6 is reinterpreted as V₇ of a key a half step above the original tonic (the key of #i or #I; or also ii or II, the "Neapolitan" key) by respelling F# as G. In the reverse process (example 26.10c), V₇ in the original key becomes the Gr +6 of a key a half step below the original tonic by respelling F as E#.

Modulation to iii or III Using the +6

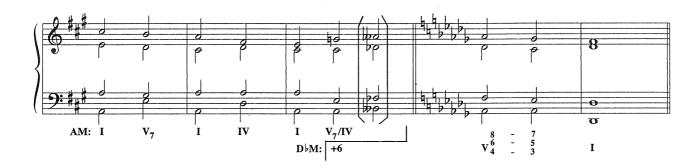
Listen to example 26.11. Measures 23–26 are in Al-M. The chord in mm. 27–28, functions as vii°_{7}/ii in Al-M, although here it does not resolve as such. Instead, it moves to the chord in m. 29, which, coming from Al-M, sounds like V_{7}/IV . As such, it would be spelled as Al-C-El-Gl. Instead, it is spelled as Al-C-El-F\frac{1}{4}, that is, as an +6 in C (M or m). Its resolution, indeed, confirms this function: It resolves to V_{4-3}^{6-5} in CM, which takes us to the next phrase in CM. We have modulated from a major key (I) to its mediant key (in this case the chromatic mediant, that is, major III, instead of the diatonic mediant, iii, or Cm) by enharmonically reinterpreting V_{7}/IV in the first key as an +6 chord in the second key.

⇒ Example 26.11

L. v. Beethoven, Symphony no. 5 in Cm, II, mm. 23-33



Example 26.12



For another example of this modulation from I to the distantly related key of III, refer to anthology, no. 39 (Schubert, Waltz, op. 9, no. 14), mm. 17–24. The key of AM was established at the end of the previous section (mm. 15–16). Measures 17–20 continue in the same key, and at m. 21 we hear that, by the addition of the seventh, the AM tonic chord becomes V_7/IV . Although the chord in m. 21, however, is spelled as a V_7/IV in AM, it does not resolve as such, but is followed by a perfect authentic cadence (PAC) in DbM. Play the progression in mm. 21–24, hearing the chord in m. 21 in DbM. You will hear that it functions as a Gr +6 in this key, and in this way it provides a pivot in the modulation between the two distantly related keys. What is the correct spelling for the Gr +6 in DbM? After you figure it out (and realize that it is a cumbersome spelling to be sure!), study the summary for this modulation as it appears in example 26.12.

Modulation Up or Down a Half Step Using the +6

Although a half step is the closest distance among pitches in the chromatic scale, it can also be the greatest tonal distance between two keys (for instance, CM and C \sharp M, with a difference of seven sharps). The modulation up or down a half step, however, can easily be effected with an enharmonic reinterpretation of the +6 chord. Consider, for instance, example 26.13. The key of AM is first established in the passage, and in m. 117 we hear a chord which, in AM, *sounds* like the Gr +6. The +6 interval (F–D \sharp), however, has been respelled enharmonically as a m7, F–E \flat . Thus, the chord *looks* like a Mm₇, specifically like V₇ in B \flat M. Its resolution to I in B \flat M indeed confirms the modulation to the key a half step above AM, the "Neapolitan key," \flat II. The Gr +6 in AM has been reinterpreted as V₇/ \flat II.

An instance of the reverse process (down a half step) appears in example 26.14. This song is in Fm, and our example begins with a passage in the secondary key area of GhM, the Neapolitan key (mm. 45-47, on a GhM dominant pedal). V_7 in Gh, which appears several times in these measures spelled as Dh-F-Ah-Ch, is enharmonically respelled, in the last beat of m. 47, as Dh-F-Ah-Bh, that is, as the Gr +6 in Fm. The resolution of this chord in m. 48 confirms the modulation to Fm, a half step down.

♪♪ Example 26.13

Louise Farrenc, Trio in Em, op. 45, I, mm. 113-121



Continued





EXERCISE

To practice enhancements spellings of V_7 and +6 chords, refer to exercise 4 in worksheet 26 at the end of this chapter.

WRITING MODULATIONS WITH +6 CHORDS

As an exercise, first write summaries in four voices of the modulations we have studied in examples 26.11, 26.13, and 26.14. The process of writing modulations similar to these is really quite simple (you can refer to example 26.10 for models):

- 1. To modulate from a major key to a key a M3 above its tonic (iii or III), after you write a complete progression establishing the first key, write a V_7/IV in this first key, and respell it as an +6 chord in the second key. Resolve this +6 to the dominant of the new key, and continue writing a complete progression in the new key.
- 2. To modulate from any M or m key to a key a half step above it, write the Gr + 6 chord in the first key, and respell it as a V_7 in the new key. Then resolve this V_7 to the new tonic chord, a half step above the original tonic.
- 3. To modulate from any M or m key to a key a half step below it, write V_7 in the original key, and respell it as the Gr + 6 chord in the new key. Then resolve this +6 to a dominant-tonic progression in the new key, a half step below the original key.

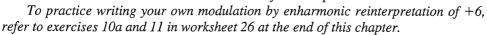
Try these three techniques with several keys of your choice.

F. Schubert, "Gefror'ne Thränen," from Winterreise, no. 3, mm. 45-51



EXERCISES

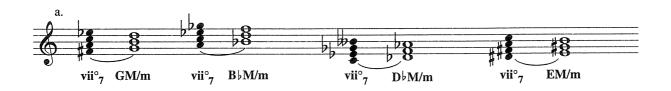
To practice realizing modulations by enharmonic reinterpretation of +6 chords, refer to exercises 5 and 6 in worksheet 26 at the end of this chapter.



MODULATION BY ENHARMONIC REINTERPRETATION OF vii°₇

As you will remember, there are only three different fully diminished seventh sonorities. All the vii°₇ chords in all keys, including all the secondary vii°₇s, are thus drawn





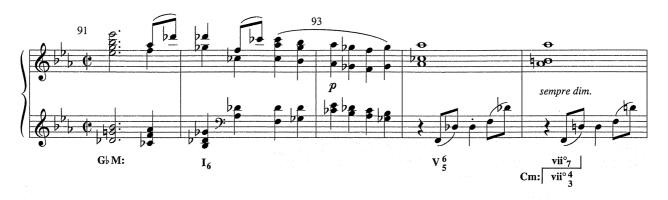


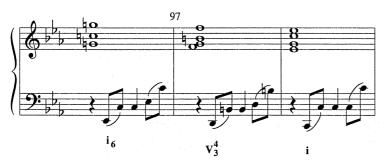


from a very limited pool of only three sonorities! Obviously, this means that each of these sonorities has a great variety of possible spellings, functions, and resolutions. Take, for instance, the vii $^{\circ}_{7}$ on F \sharp , with F \sharp as the leading tone. The same sonority can be built on A, C, or D \sharp , using each of these pitches as a leading tone. Each of these sonorities can be resolved to its tonic (G, B \flat , D \flat , or E, respectively). Example 26.15a shows each of these spellings in root position and its resolution to the corresponding tonic. Example 26.15b demonstrates how the same position can be reinterpreted to represent different inversions in different keys. Examples 26.15a and b assume only "primary" resolutions. Of course, the same sonority can also have numerous secondary functions in a great variety of keys. Example 26.15c shows just a few of these possibilities.

In other words, by respelling and reinterpreting the function of vii°, we could conceivably modulate from any key to any other possible key! This is truly one of the most powerful techniques of chromatic modulation we have discussed so far. As an exercise, try to determine how you would modulate from CM (or Cm) to each of the other eleven M/m pairs of keys using vii°, chords as pivots (identify the specific vii°, you would use for each of the modulations).

L. v. Beethoven, Piano Sonata in ElM, op. 81a, I, mm. 91-98



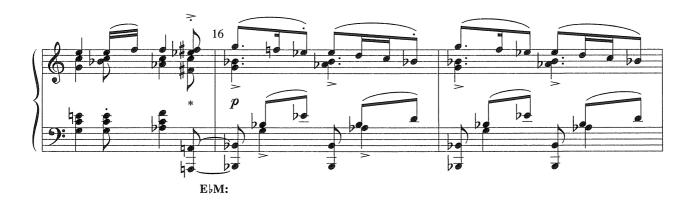


Let us examine some examples from the literature using this procedure. In example 26.16 we find a modulation from $G \not M$ to the distant key of Cm. After the V_5^6 in $G \not M$ in m. 94, the chord in m. 95 first sounds like vii°_7 in this same key. Its spelling, however, is not $F-A \not - C \not - E \not + D$, as it would be if it were functioning in $G \not M$, but rather $F-A \not - B \not - D$, suggesting a vii°_3 in Cm. The resolution of the chord to i_6 in Cm, and the subsequent confirmation of this key, prove that the chord in m. 95 is indeed reinterpreted enharmonically as a means to effect this distant modulation.

The vii°_{7} chord used as a pivot in the previous example functions as a "primary" chord in both keys. Look now at example 26.17. The modulation here is from CM to $E^{\downarrow}M$, also a distant modulation. How would you interpret the last chord in m. 15 in CM (think of the exact function and inversion)? Obviously, although it is spelled according to this function, it does not resolve to the expected chord in CM. Instead, we move to $E^{\downarrow}M$. Go back to the last chord in m. 15, and reinterpret it in this new key (providing its exact position). Does it need any enharmonic respelling? If you do this right, you will find that the chord functions as a secondary vii°_{7}/V in each of the keys (in first inversion for CM, in root position for $E^{\downarrow}M$). These two examples provide a brief but sufficient illustration of the manifold modulating possibilities afforded by the fully diminished seventh sonority.

F. Schubert, Piano Sonata in Am, op. 164, I, mm. 10–17







EXERCISES

To practice enharmonic spellings of vii $^{\circ}_{7}$ chords, refer to exercise 7 in worksheet 26 at the end of this chapter.

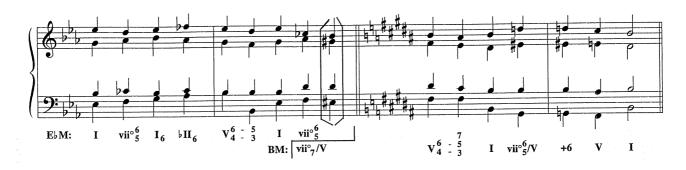
To practice realizing modulations by enharmonic reinterpretation of vii $^{\circ}_{7}$ chords, refer to exercises 8 and 9 in worksheet 26 at the end of this chapter.

WRITING MODULATIONS WITH vii^o, CHORDS

If you want to modulate from any key to any other key, you can certainly find some enharmonic reinterpretation of some vii°, that will take you there. Suppose that we want to go from E M to BM. The following procedure will help us find the right pivot to do so.

1. First, examine the "primary" vii°, chord in ElM: D-F-Al-Cl. (If you were not to find any good pivot relationship using this chord, you could follow the same process with any secondary vii°, until you found a pivot that suited you.)

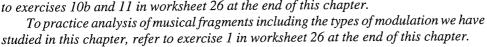




- 2. Can this chord be used as either the primary vii°, in BM, or perhaps as a secondary one? We see that although it cannot function as the primary chord, this is the same sonority as the one for vii°,/V in BM (E#-G#-B-D). So we have a good pivot relationship on which to build our modulation.
- 3. Finally, it's all a matter of writing a good, musical realization of this modulation in the form of a modulating progression. Example 26.18 provides a sample realization of our modulation from ElM to BM.

EXERCISES

To practice writing your own modulation by enharmonic reinterpretation of vii°_{7} , refer to exercises 10b and 11 in worksheet 26 at the end of this chapter.





FOR FURTHER STUDY

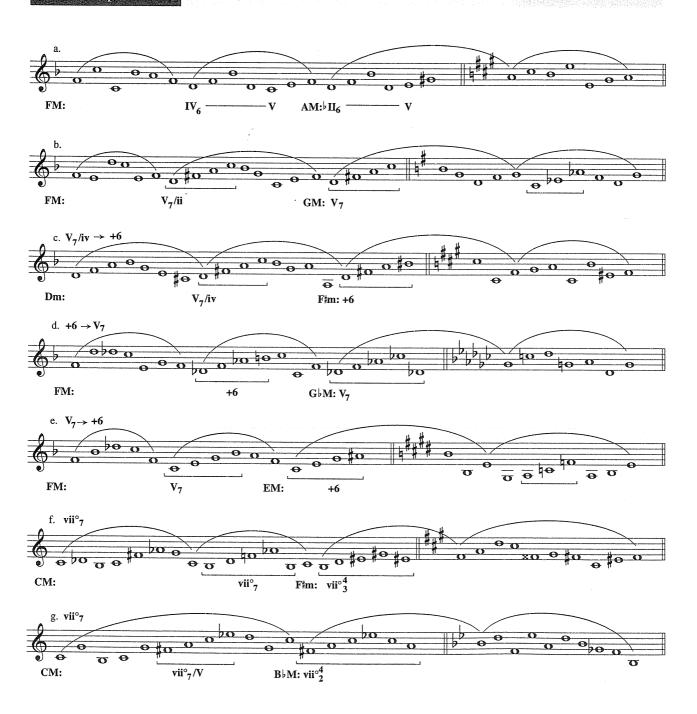
For additional analysis using materials studied in this chapter, refer to the *Harmony in Context* Web page at www.mhhe.com/roigfrancoli2e.

ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 26 in the workbook.

PITCH PATTERNS

Sing the following melodic pitch patterns in example 26.19. As you sing, listen to the modulation in each of the patterns, paying special attention to the chromatic pivot or to the enharmonic reinterpretation that effects the modulation. Practice *improvising* similar pitch patterns modulating to different keys.



Terms for Review

Distantly related keys
Chromatic pivot chord
Chromatic pivot relationships:
 diatonic-chromatic, chromatic-diatonic, chromatic-chromatic
Modulation by enharmonic
 reinterpretation of the +6 chord

Modulation to iii or III using the +6
Modulation up or down a half step using
the +6
Enharmonic reinterpretation of vii°₇



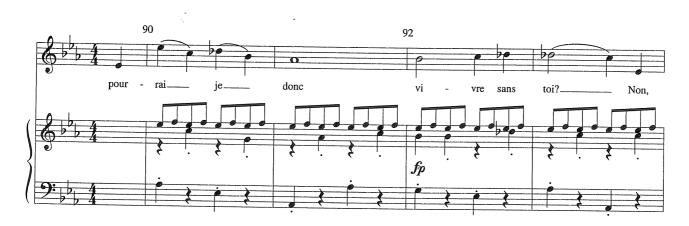
Worksheet 26

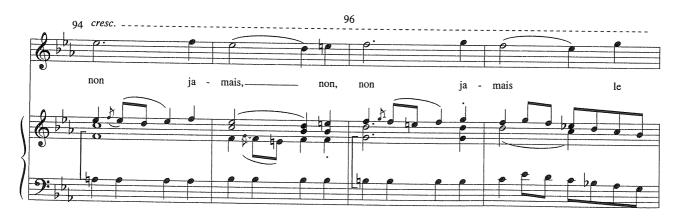
EXERCISE 1 Analysis.

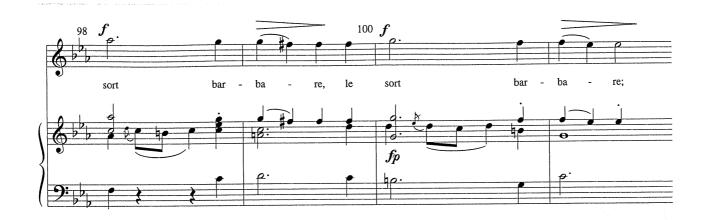
1. The modulation in example 26.20 features a chromatic pivot chord. Analyze the complete passage with RNs, and explain the modulation and the pivot chord.

Example 26.20

Chevalier de Saint-Georges, Aria "O Clemangis, lis dans mon âme," from *Ernestine*, mm. 90–101

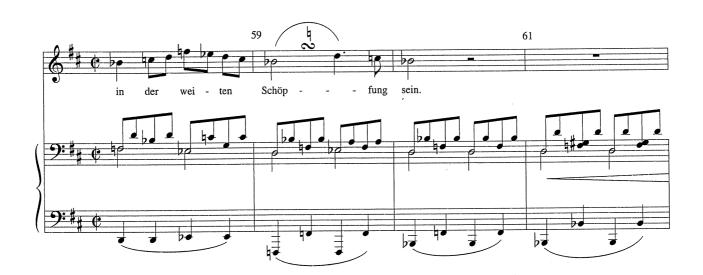




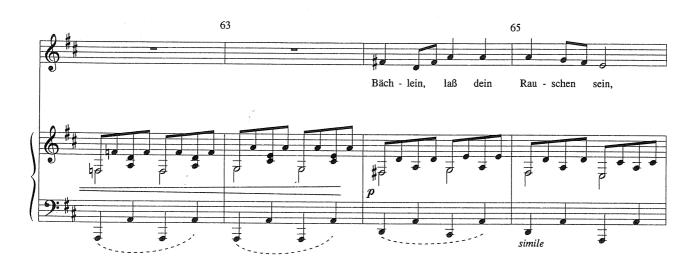


- 2. The following examples feature the II key area and/or modulations by enharmonic reinterpretation of +6. Analyze each of them, identify the modulations or the II key area, the keys involved, and the exact function of the pivot chord in each of the keys.
 - a) Example 26.21.

F. Schubert, "Mein," from Die schöne Müllerin, mm. 58-65

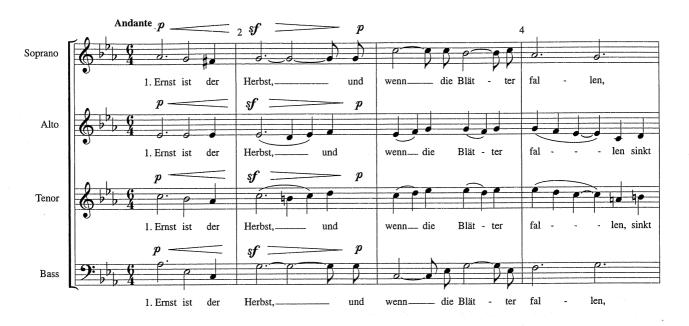


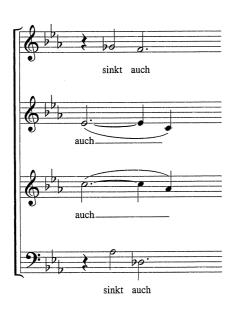
Example 26.21 Continued



- b) Anthology, no. 34, Beethoven, Sonata op. 13, Pathétique, III, mm. 193-210.
 - 1) Explain the modulation from Cm to Al-M in mm. 197–203.
 - 2) Then, explain the return to Cm in mm. 206-210.
- c) Example 26.22.
- d) Anthology, no. 38, Schubert, Erlkönig.
 - 1) Explain the modulation in mm. 105-112.
 - 2) Measures 116–123 are in Dm. What secondary key area of Dm is included in these measures?
 - 3) Analyze mm. 131-148. What secondary key areas can you identify?

J. Brahms, Im Herbst, mm. 1-5





- e) Anthology, no. 36, Beethoven, Sonata in ElM, op. 7, II, mm. 33-51.
 - 1) This movement is in CM. What is the key in m. 33?
 - 2) Explain the modulation back to C, which actually takes place in mm. 36-37.
- 3. The following examples feature modulation by enharmonic reinterpretation of vii°₇ chords. Analyze each of them, identify the modulations, the keys involved, and the exact function of the pivot chord in each of the keys.
 - a) Example 26.23.
 - b) Anthology, no. 51, Liszt, Consolation no. 4, mm. 23-25.

F. Schubert, "Gefror'ne Thränen," from Winterreise, no. 3, mm. 30–37



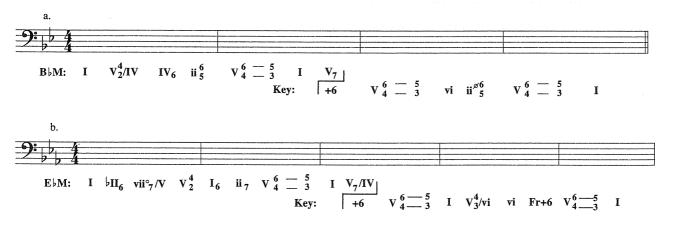
EXERCISE 2 The following statements refer to chronical fill in the blank in each statement.	o e Parking And Parking a continue
Diatonic-Chromatic	
1. IV ₆ in becomes ♭II ₆ in C‡m.	
2. VI in F#m becomes V/V in	
3 in Gm becomes II_6 in AM.	
4. iii in E♭m becomes in DM.	
Chromatic-Diatonic	
1. $ \downarrow II_6 $ in Bm becomes V_6 in	
2. V_7/ii in becomes V_7 in DM.	
3. iv in EM becomes in GM.	
4 in FM becomes IV ₆ in D\mathbb{M}.	
Chromatic-Chromatic	
1. V ₃ ⁴ /vi in FM becomes V ₃ ⁴ /V in	
2. vii° ₇ /iv in becomes vii° ₇ /V in Gm.	
3 in C#m becomes vii° ₇ /iv in Bm.	
4. vii° ₇ /ii in BbM becomes in GM.	
EXERCISE 3 Write the following chromatic pivot chwith indication of the pivot chord).	ord modulations (bass and RNs,
a. From DM to C‡m using ↓II ₆ of C‡m as a pivot.	
b. From GM to EhM using a borrowed chord in GM a	s pivot.
c. From CM to AM using a vii° ₇ chord with a secon instance, vii° ₇ /ii in CM).	dary function in both keys (for
a.	
9:##	
DM:	
b.	
9:#	
GM:	
с.	
9:	

CM:

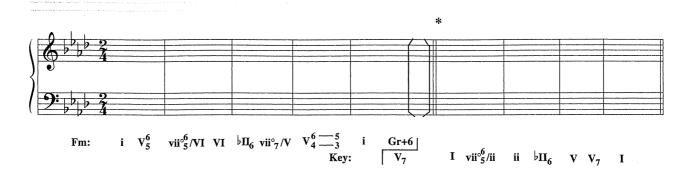
EXERCISE 4 In each of the spaces in this exercise, spell the first chord in the required key. Then respell the chord to function as required by the second Roman numeral, and indicate in which key it would have this second function. An example is provided for each of the three types of required respelling.



EXERCISE 5 The following RNs represent modulations by enharmonic reinterpretation of the Gr + 6 chord. Write the bass line for each progression, and indicate what key we have modulated to in each case.



EXERCISE 6 Write the following modulating progression in four voices. Provide both enharmonic spellings for the pivot chord. Write the key signature for the new key after the double bar (in the space marked with an asterisk).



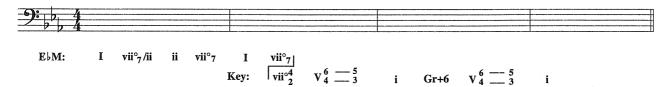
EXERCISE 7

- a. Write and resolve vii^o₇ in Fm. This chord may be used to modulate to three other minor keys by respelling it enharmonically. Indicate the keys and provide the spelling (leaving the chord in the same position), the correct RN, and the correct resolution to the corresponding tonic in each of the new keys. For a reference of what you are doing exactly, see example 26.15b in this chapter (although in that example the chords are not resolved).
- b. Follow the same process as above, but now show how vii^o₇ in B¹₂M functions in three other major keys.
- c. The following statements refer to enharmonically respelled vii°₇ chords. Fill in the blank in each statement.
 - 1. vii^o₇ in B_b becomes _____ in G.
 - 2. _____ in G becomes vii^{o4} in Db.
 - 3. vii° in _____ becomes vii° in Eb.
 - 4. vii° in F becomes vii° in _____.

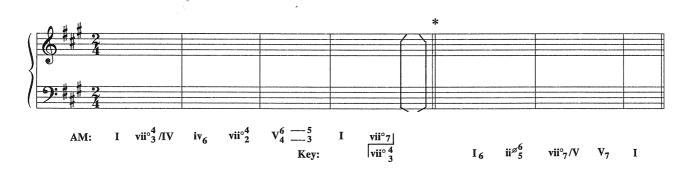
a.	Key 1: Fm	Key 2:	Key 3:	Key 4:	b. Key 1: BbM	Key 2:	Key 3:	Key 4:
(6								
							-	
/ n:								
					<u> </u>			

Gm:

EXERCISE 8 The RNs in this exercise represent a modulation by enharmonic reinterpretation of vii^o₇. Write the bass line and indicate what key we have modulated to.

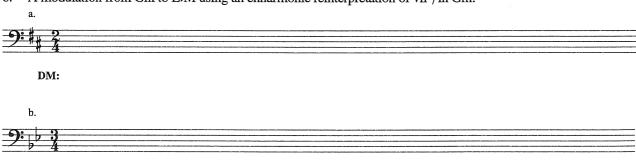


EXERCISE 9 Write the following modulating progression in four voices. Provide both enharmonic spellings for the pivot chord. Write the key signature for the new key after the double bar (in the space marked with an asterisk).



EXERCISE 10 Write your own modulating progressions (bass and RNs) using Gr +6 and vii^o₇ chords as pivots.

- A modulation from DM to its Neapolitan key using an enharmonic reinterpretation of the Gr + 6.
- A modulation from Gm to ElM using an enharmonic reinterpretation of vii^o₇ in Gm. b.



EXERCISE 11 Choose one of the modulating progressions you have written in exercise 3 and one from exercise 10, and, using your own music paper, write two phrases based on your progressions for a melodic instrument with keyboard accompaniment.

Chapter 27

Modulation to Distantly Related Keys II; Linear Chromaticism I

In this chapter we will first continue our study of modulation to distantly related keys. We will focus specifically on chromatic third-related keys and on the technique of common-tone modulation. In the second part of the chapter we will study several types of chords usually generated by means of linear chromaticism.

CHROMATIC THIRD RELATIONSHIPS

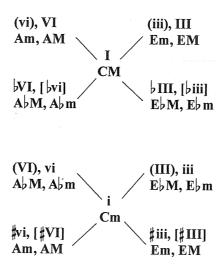
Two triads are related by **chromatic third** if their *roots are a M or m 3rd apart*, and their members belong to *different diatonic scales* Example 27.1 presents a chart of all triads related by third with both a M and a m triad. The triads in parentheses (vi and iii in M, VI and III in m) have a *diatonic third* relationship with the tonic triad because their members belong to the *same diatonic scale* as the members of the tonic triad (vi: A–C–E and iii: E–G–B belong to the same diatonic scale as I: C–E–G, the CM "white-key" scale). The rest of the triads, on the other hand, display members belonging to different diatonic scales than the members of the tonic triad (both VI: AV-C-EV and III: E–GV-B belong to different diatonic scales than I: C–E–G).

There are, then, six triads related by chromatic third to any M triad and six more related to any m triad. These triads are also called **chromatic mediants** because they are altered mediant and submediant chords. Four of the set of six chromatic third-related triads have a *common tone* with I or i, and two of the triads do not. The triads that do not have common tones with I or i are indicated in brackets in our example. Verify what the common tone with I is for each of the following triads: VI, \(\begin{align*} VI, \(\mathbb{III}, \) and \(\beta \) III; and with i for triads vi, \(\mathbb{V}i, \(\mathbb{IV}i, \) iii, and \(\mathbb{I}\) iii.



EXERCISE

To practice determining the set of triads related to a given triad by chromatic third, refer to exercise 2 in worksheet 27 at the end of this chapter.

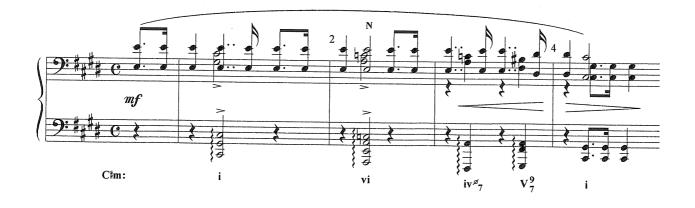


TRIADS RELATED BY CHROMATIC THIRD

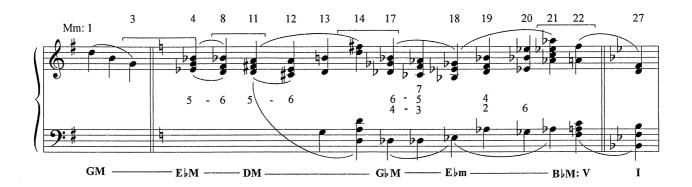
Chromatic third relationships can exist between triads or between keys. We will first examine third-related triads. Consider, for instance, the beginning of Franz Liszt's "Il pensieroso" (example 27.2). The end of the phrase establishes the key of C‡m. The first two chords, on the other hand, are not related functionally within this key: The C‡m-Am triads do not belong to the same diatonic scale, and their relationship, i–vi, is not functional, but rather linear: The Am triad is a chromatic neighbor chord that prolongs i. The phrase, however, is strongly tied together tonally by the reiterated E in the right



Franz Liszt, "Il pensieroso," from Années de Pèlerinage, mm. 1-4



Harmonic Reduction of Verdi's Recitative to "Celeste Aida," Aida, act I



hand, the pitch that connects the C#m and Am triads by common tone, and by the bass in descending 3rds (C#A-F#) leading to the $\hat{5}$ - $\hat{1}$ cadential motion. The third chord is an altered pre-dominant, a iv₇ with a lowered fifth (iv^o₇). We will study altered chords (chords with a raised or lowered fifth) later in this chapter.

Because they do not belong to the same diatonic scale, and because, hence, they are not harmonically related according to the tenets of functional progression, chromatic third triads can suspend the sense of functional tonality momentarily. An interesting use of chromatic third-related triads can be found in the recitative introducing Verdi's famous aria, "Celeste Aida" (anthology, no. 55). Example 27.3 presents a harmonic reduction of the passage, in which all harmonies have been reduced to quarter notes, regardless of their duration in the music (slurs denote harmonic grouping). In this passage, the Egyptian general, Radames, expresses his ambition to be the leader in the upcoming war campaign against the Ethiopians, and to be able to dedicate his victory to his beloved Aida (a captive Ethiopian princess, none other than the daughter of the Ethiopian king Radames hopes to defeat!). The military trumpet calls reflect the mood of the occasion, and the seemingly erratic tonal content of the passage reflects the sense of brewing conflict. The path from the initial GM to the final BlM (two keys related by chromatic third) takes us through the distant tonal areas of ElM, DM, GlM, and Elm. Play through the reduction, and notice that some of the key areas are barely suggested (ElM and GlM, for instance).

The connection between several of the key areas is effected by direct motion between chromatic third-related triads (marked with brackets over the graph). In mm. 3–4, we move directly from a GM triad to an ElM triad (I–IVI in GM). In mm. 8–11, the motion is from a BlM triad to a DM triad (IVI–II in DM). In mm. 14–17, the motion is from a DM triad to a GlM $_6^4$ sonority (I–III in DM, with III spelled enharmonically). And, finally, in mm. 21–22 we hear a nonfunctional connection between an AlM triad (IV in Elm, or IVII in BlM) and an FM triad (V in BlM). These nonfunctional triadic connections that are used to move from one key area to the next further weaken both the sense of functional tonality and the overall sense of tonal unity in this passage.



EXERCISE

To practice spelling triads related by chromatic third, refer to exercise 3 in work-sheet 27 at the end of this chapter.

KEYS RELATED BY CHROMATIC THIRD: COMMON-TONE MODULATION

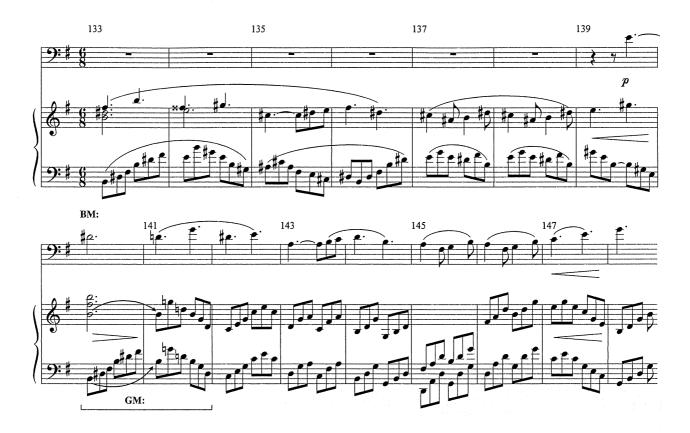
The chromatic third relationship among keys is a distant one (as illustrated by such key area relationships, in the Verdi example above, as GM-ElM or DM-GlM—an enharmonic spelling of the 3rd relationship DM-FlM). The modulation between chromatic third—related keys, however, can be a very direct one because of the common tone some of them share. In the most direct type of **common-tone modulation**, the pitch common to the tonic chords of two keys is reinterpreted as the new degree in the second key and used as a **pivot pitch** to modulate. Common-tone (CT) modulation directly connecting tonic chords is possible only between tonics that do have a common tone (the keys in brackets in example 27.1 are thus excluded). That leaves four possible chromatic third—related keys from any M or m key. Example 27.4 shows the common-tone connection from both CM and Cm to each of these possible keys. (Common-tone modulation is also possible between diatonic third—related keys, and in these cases there are even two possible common tones between tonics.)

The CT in common-tone modulations need not be only between tonic chords. In example 27.6 you can see a fragment of a song in FM by Beethoven. The fragment begins with a phrase on V_7 in FM and moves directly to I_6 in the new key, AlM (III), taking advantage of the common tone C between V_7 in FM and I in AlM, in both cases placed in the bass. Although this modulation uses a CT between V of the old key and I

∑∑Example 27.4



L. Farrenc, Trio in Em. op. 45, I, mm. 133-148



of the new key, the tone, C, happens to be the same that would have been used to modulate directly from tonic to tonic of the same keys. A similar case appears in the excerpt reproduced in example 27.7. The passage begins in Bm, and moves to DM by CT. Does the CT connect the two tonics, or two chords other than the two tonics? Could the same CT have connected the two tonics? Are the two keys involved in this modulation related by chromatic third?

bVI as a Key Area

Among the chromatic third-related keys displayed in example 27.1, $\[VI \]$ in M is the most frequently encountered in the repertoire. In long-range key schemes, the $\[VI \]$ key or secondary key area has a similar function as the $\[VI \]$ chord: It results from modal mixture, and it is really a key "borrowed" from minor. The modulation in example 27.8 illustrates that the pivot pitch in this motion from I to $\[VI \]$ is $\[\hat{1} \]$ in the original key. The tonic cadence in m. 24 stresses $\[\hat{1} \]$ as the bass and as the top pitch in both hands. The next measure, I in $\[A\]$ M, includes the same pitch in the same register in both hands, now

L. v. Beethoven, "Hoffnung," from *Four Ariettas and a Duet*, op. 82, no. 1, mm. 9–15



W. A. Mozart, Fantasia in Cm, K. 475, mm. 24-27



with a $\hat{3}$ function. Consult this complete passage in anthology, no. 36, as an example of long-range mixture. The movement is in CM, and the key areas in mm. 22–51 are CM–AbM–Fm–DbM–Cm–CM, that is, I–bVI–iv–bII–i–I. In other words, the overall design is of descending thirds, and all the areas between the two C major tonic areas are borrowed from C minor.

EXERCISE

To practice writing a common-tone modulation, refer to exercise 4 in worksheet 27 at the end of this chapter.



L. v. Beethoven, Piano Sonata op. 7 in EM, II, mm. 22-28





EXERCISE

To practice analyzing musical fragments including triads related by chromatic third or common-tone modulations, refer to exercises 1.1 and 1.2 in worksheet 27 at the end of this chapter.

LINEAR CHROMATICISM I: LINEAR CHROMATIC CHORDS

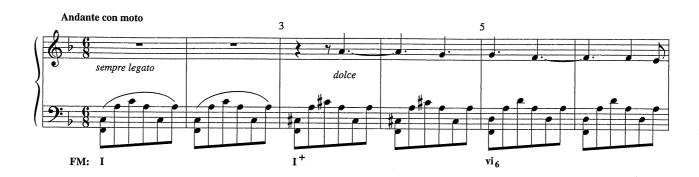
Throughout our study of harmony in previous chapters we have stressed that some chords are generated linearly—that is, they result from melodic processes rather than vertical chord generation. In the sections that follow we will continue our study of linear harmony, focusing on some chromatic chords that result from linear processes.

ALTERED TRIADS

Romantic composers (especially in the second half of the nineteenth century) often altered the fifth of a major triad chromatically. An **altered triad** is a major triad with an augmented or diminished fifth. Most commonly, triads are altered to become augmented,



C. Schumann, "Notturno," from *Vier Stücke aus Soirées Musicales*, op. 2, no. 2, mm. 1–6



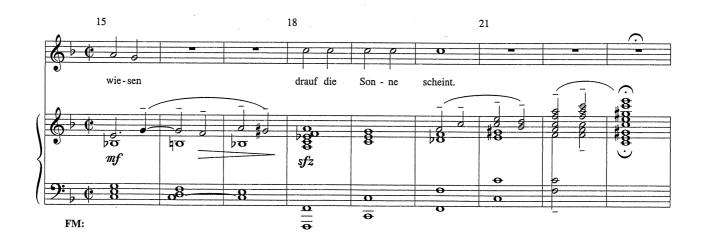
and among all the diatonic triads, V is the one most often presented with a sharpened fifth, to become V^* .

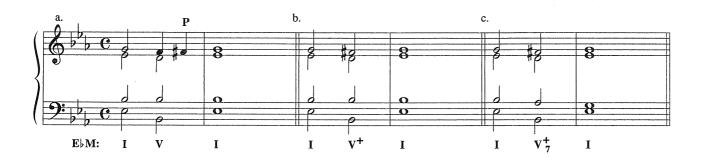
Altered triads are sometimes generated by chromatic linear motion. In example 27.9, a passing C^{\sharp} , part of the linear gesture $C-C^{\sharp}$ —D in mm. 1–5, turns the initial I into an augmented triad, I^{*} .

Not all altered triads, however, result from such linear motions. Romantic composers also altered triads for dramatic, expressive, or simply coloristic purposes, to create a richer, more chromatic (and also less stable) harmonic vocabulary. In example 27.10, the dominant of FM appears both in its unaltered form (as V and V_7) and with a sharpened fifth, as V^+ and V^+_7 . Identify each of the dominant chords in the passage and determine whether it is an altered chord.



Alma Mahler, "Ekstase," from Five Songs, no. 2, mm. 15-23





Examine the spelling and voice leading for the V⁺ and V⁺, chords in examples 27.11a to c. In four voices, the altered fifth should not be doubled and should moreover resolve upward to $\hat{3}$ (notice that resolving it down to $\hat{1}$ would create a melodic +2).



EXERCISE

To practice realizing short progressions including altered triads, refer to exercises 5a to c in worksheet 27 at the end of this chapter.

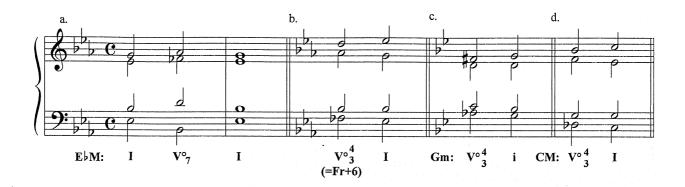
AUGMENTED SIXTH CHORDS WITH DOMINANT AND EMBELLISHING FUNCTIONS

In chapter 25 we studied that +6 chords with a pre-dominant function are based on the +6 interval between $\, \downarrow \, \hat{6} \,$ and $\, \sharp \, \hat{4} \,$, and that their pre-dominant function results from the linear tendencies of both $\, \downarrow \, \hat{6} \,$ and $\, \sharp \, \hat{4} \,$ to resolve to $\, \hat{5} \,$. In this section we will study two types of +6 chords that move directly to the tonic and that have a dominant and embellishing function, respectively. 1

The +6 with a Dominant Function

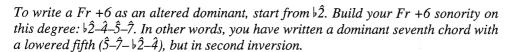
Just as we build +6 chords using the pre-dominant $\flat \hat{0} - \# \hat{4}$ frame, it is possible to build +6 chords using the +6 frame provided by $\flat \hat{2}$ and $\hat{7}$ ($\# \hat{7}$ in minor), two degrees that have a linear tendency to resolve to $\hat{1}$. Because such +6 chords move indeed directly to the tonic, and because they include the leading tone, they have a dominant function. Most often, this type of +6 appears in the form of a Fr +6 on $\flat \hat{2}$ ($\flat \hat{2} - \hat{4} - \hat{5} - \hat{7}$), as you can see in example 27.12.

¹ For a study of the different +6 functional types, with a detailed discussion of +6 chords that do not have a pre-dominant function, see Daniel Harrison, "Supplement to the Theory of Augmented-Sixth Chords," *Music Theory Spectrum* 17 (1995): 170–95.



The dominant function of this type of Fr +6 becomes even more evident if we think of it as an altered V_3^4 chord. Example 27.12a illustrates a V_7 in $E \nmid M$ with a diminished fifth, V_7° (notice, in this example, that lowering the fifth of a major triad produces a sonority that is *not* a diminished triad, for instance, C-E-G \nmid , or $B \nmid -D-F \nmid$ in our example). This interesting sonority appears most often in second inversion, in the form of V_3° . If you play example 27.12, you will recognize that this sonority is the same as the Fr +6 built on $\nmid \hat{2}$. We can best think of this chord as a Fr + 6 on $\nmid \hat{2}$, with a V_3° function, and resolving directly to the tonic. To avoid confusion with the label for the pre-dominant Fr + 6 on $\nmid \hat{6}$, we will refer to the Fr + 6 on $\nmid \hat{2}$ as V_3° . Examples 27.12c and d show the spelling and resolution of this chord in Gm and CM, respectively. In all cases, notice the linear motion to $\hat{1}$ of the upper and lower leading tones, $\hat{7}$ and $\nmid \hat{2}$.

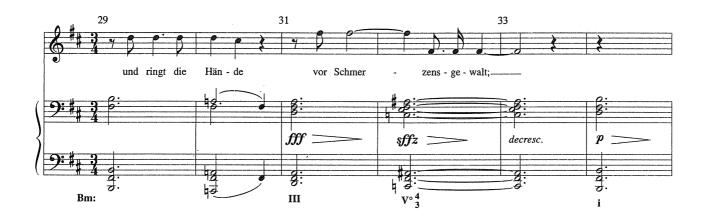
NOTE





The expressive power of this chord is dramatically realized in the passage reproduced in example 27.13, taken from one of Schubert's most intense songs. In Heine's poem, a man goes back, after many years, to the house where his "dear one once dwelt." In front of the house, he finds a man "wringing his hands in overwhelming grief." The grief, "Schmerzensgewalt" in mm. 31–33, is musically depicted by our chord (m. 32). Does register play any role in this depiction? Explain the linear function of our $V_3^{\circ 4}$ as it connects III and i in these measures. Incidentally, the next appearance of the $V_3^{\circ 4}$ chord comes a few bars later, in m. 42, when the poet realizes that the man wringing his hands in pain is none other than . . . himself! (The title of the song is "Der Doppelgänger," "The Phantom Double"!)

F. Schubert, "Der Doppelgänger," from *Schwanengesang*, no. 13, mm. 29–34





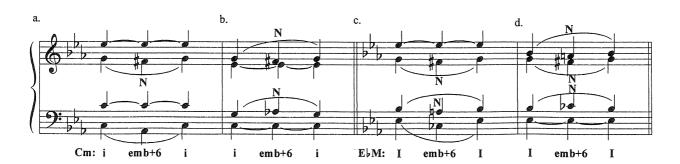
EXERCISE

To practice realizing short progressions including the Fr+6 as an altered dominant, refer to exercises 5d to f in worksheet 27 at the end of this chapter.

The Embellishing (or Common-Tone) Gr +6 Chord

Because the Gr +6 chord on \flat 6 has two common tones with the minor tonic chord ($\hat{1}$ and \flat 3) and one common tone with the major tonic ($\hat{1}$), it can be used as a chord prolonging the tonic, with a voice leading that takes advantage of the common tone or tones. Example 27.14a demonstrates the voice leading with both i and the +6 in root position

Example 27.14

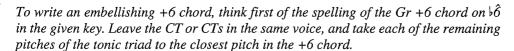


and with the root doubled in i: Two voices feature common tones, the bass moves by an arpeggiation of a third, and the third voice is a neighbor note. Example 27.14b shows the same chord, but with the prolonged (and common) $\hat{1}$ in the bass and the fifth doubled in i. The +6 chord is now in first inversion, and the voice leading features two neighbor notes (NNs).

Examples 27.14c and d present the same chords in a major key, with only one CT. The root-position example (with the root doubled in I) features two NNs, whereas the example with the +6 in first inversion and the fifth doubled in I features three NNs. (Notice, in the examples in the major mode, the enharmonic spelling of the fifth in the +6 chord, F# instead of Gb, to stress the NN function of this pitch.)

In other words, this is an +6 that functions linearly by means of CTs and NNs, and whose function is to prolong and embellish the tonic triad as a *neighbor chord*. We will then call it the *embellishing* +6 (or common-tone +6). Notice the similarities in both voice leading and function between this progression and the familiar embellishing N_4^6 progression $(I-N_4^6-I)$.

NOTE





In the fragment by César Franck reproduced in example 27.15, the Gr +6 chord in AM is first introduced as a linear prolongation of the tonic chord, an embellishing +6, in m. 9. Compare this measure with example 27.14c, and verify the CT and NN functions. How could Franck have spelled this chord to clarify the NN role of the pitch C^{\dagger} ? When the chord appears again in m. 10, does it resolve as an emb. +6?

EXERCISE

To practice realizing short progressions including embellishing Gr + 6 chords, refer to exercises 5g and h in worksheet 27 at the end of this chapter.



As we saw in example 27.14, the embellishing +6 can appear in any inversion. Play through, or listen to, example 27.16a. Then play through example 27.16b. This reduction represents the key areas in the Schubert example. Considering that Am is the main key of the passage, these areas are v-iv-vii-i. Each of these areas closes with a tonic embellished by an +6 chord, as indicated in the reduction. What type ("nationality") of +6 chord is it? In what inversion does it appear in the first three key areas? And in the last key area? Identify all the NN motions in this linear connection. Now examine the common tone between the +6 and the tonic in each key area. Where is it placed in each case? Is it stressed rhythmically or texturally in any way?

PRACTICAL APPLICATION AND DISCUSSION

- 1. Study and understand each of the modulations between the key areas in example 27.16a.
- 2. The text of this passage is as follows: "And as the cocks are crowing, I rise and look without; the day is cold and dreary, the ravens are screaming about." The title of the song is "Spring Dream," and the poem (by Wilhelm Müller) tells of a dream of spring, beauty, and love the poet just had. Upon awakening, he is confronted again by his reality: He is lonely, it is cold, gloomy, and the ravens are shrieking. How is this reflected by the
- music? The song is in AM. What is the mode of each of the key areas in this passage? Is this a tonally stable passage? How is the poet's dreary reality reflected by the tonality of this fragment? Are the crowings of cocks and the screams of ravens depicted musically in any way?
- 3. Discuss in class how your analyses of text and harmony would affect your performance of this passage. What moods and feelings would you try to transmit through your performance, and how?

Example 27.15

César Franck, Sonata for Violin and Piano, I, mm. 5-13



Example 27.16a

F. Schubert, "Frühlingstraum," from Die Winterreise, no. 11, mm. 15-22

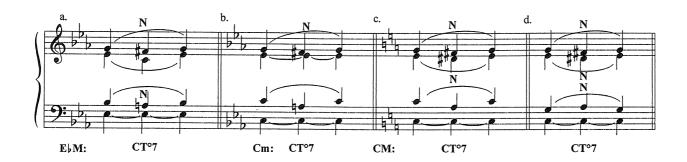


Example 27.16b



THE COMMON-TONE DIMINISHED SEVENTH CHORD

The **common-tone diminished seventh chord (CT °7)** is another linear chord which, like the emb. +6, is based on common tone and NN voice leading. This is a °7 chord that prolongs or embellishes any chord, provided that the root of the prolonged chord be a note of the °7 chord. Look at example 27.17 for clarification: The root of the EbM chord



is a pitch also present in the following embellishing °7 chord, which spelled from its own root is F#-A-C-Eb. This is a nonfunctional chromatic chord that prolongs the original triad by means of a CT, two NNs, and a leap of a third (or just a CT and three NNs if you doubled the fifth in the original chord, as in example 27.17d). If the prolonged chord is minor, then the °7 chord has two common tones (example 27.17b).



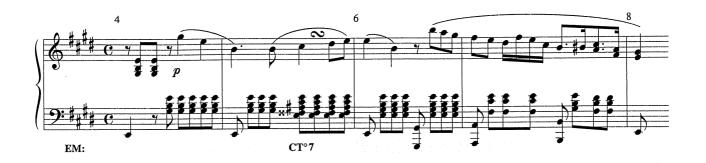
NOTE

To write a CT °7, find the °7 chord that contains the root of the given chord; leave this CT in the bass, and then take each of the pitches in the original chord to the closest possible pitch in the °7 chord. If you doubled the root in the original chord, your voice leading to the °7 chord will include two NN figures (only one for a minor chord) and a downward third arpeggiation in the upper voices. With a doubled fifth, you will have three NNs.

The CT °7 often appears at the beginning of a piece or phrase, providing an opening tonic prolongation in the form of a *neighbor chord*. This is exactly how it is used by Mendelssohn in example 27.18, where the chord returns to the tonic, completing the NN figures.

Refer back to Franck's excerpt in example 27.15. What is the chord that precedes the emb. +6? Notice the similarity of both chords, in pitch content and function. Example 27.19, on the other hand, presents a slightly different type of CT °7. It connects I with V_5^c , and, as it turns out, the root of I is not a CT with the °7 chord, but the root of $V_7(G)$ is. On the other hand, both the third and fifth of I (E and G) are common tones with the °7 chord. In other words, our °7 has two CTs with I and one CT with V_7 . If you consider the basic melodic motion that these three chords harmonize (the C-C\pm D figure in the voice), what is the linear function of this CT °7?

Felix Mendelssohn, Rondo Capriccioso, op. 14, mm. 4-8



EXERCISES

To practice realizing short progressions including CT°7 chords, refer to exercises 5i and j in worksheet 27 at the end of this chapter.

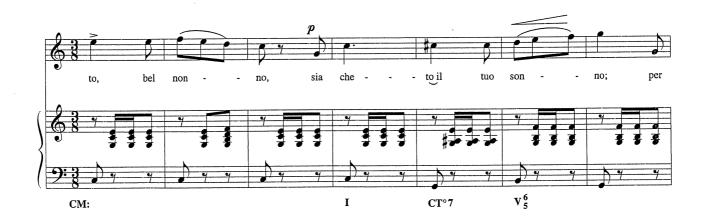


To practice realizing a progression including chromatic chords of the types we studied, refer to exercise 6 in worksheet 27 at the end of this chapter.

To practice analyzing musical fragments including chromatic chords of the types we studied, refer to exercise 1.3 in worksheet 27 at the end of this chapter.

🔝 Example 27.19

G. Donizetti, Don Pasquale, act III, no. 9



FOR FURTHER STUDY

For additional chapter 27 materials, refer to the *Harmony in Context* Web page at www.mhhe.com/roigfrancoli2e.

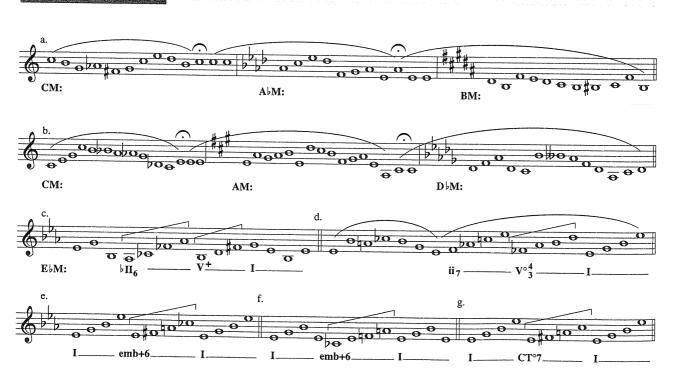
ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 27 in the workbook.

PITCH PATTERNS

Sing the melodic pitch patterns in example 27.20, and as you sing, listen to the modulation to a chromatic third-related key in the patterns that include one. In the CT modulations, take time at the fermata to hear the new tonic as it relates to the common tone. Practice *improvising* similar pitch patterns modulating to different chromatic third-related keys. For the patterns that do not modulate, hear the linear chromatic chord featured in each of them.

Example 27.20



Terms for Review

Chromatic third relationships
Chromatic mediants
Triads related by chromatic third
Keys related by chromatic third with a
given key
Common-tone modulation
Pivot pitch

VI as a key area
Altered triads
+6 with a dominant function
Fr +6 on ♭2 as V°4
Embellishing (common-tone) +6
Common-tone °7 chord

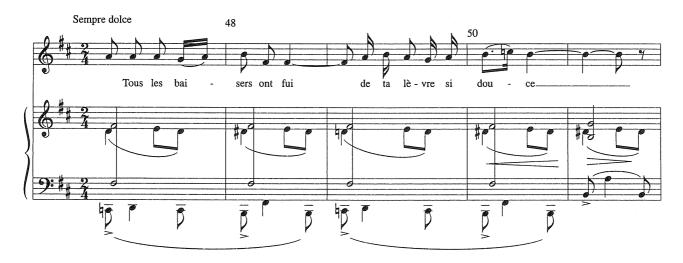


Worksheet 27

EXERCISE 1 Analysis.

1. Study the chordal relationships in example 27.21. Provide Roman numerals (RNs), and explain with the correct term how the chords are related.

Example 27.21 Gabriel Fauré, "Les Roses d'Ispahan," op. 39, no. 4, mm. 47–51



- 2. Study the modulations that follow. For each of them, determine these points:
 - 1. What keys are involved?
 - 2. How are the keys related (diatonic third, chromatic third, half step, etc.)
 - 3. What is the RN relationship between the keys? (Be aware of possible enharmonic spellings of keys.)
 - 4. What type of modulation is it?
 - 5. If it is a CT modulation, what is the CT? Or is there, perhaps, more than one CT?
 - 6. What are the functions of the triads used in the CT modulation?

Following are the modulations to be analyzed:

a) Example 27.22

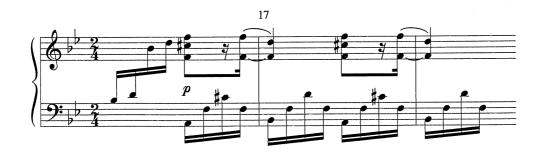
کہ Example 27.22

F. Chopin, Étude in AbM, from Trois Nouvelles Études, mm. 14-18



- b) Anthology, no. 51, Liszt, Consolation, no. 4, mm. 15-18.
- 3. The following passages include examples of altered triads, Fr + 6 as V_3^0 , embellishing +6, or CT^0 7 chords. Identify and label the particular chord illustrated in each example, and determine its exact linear function (passing, neighbor/embellishing, etc.).
 - a) Example 27.23

J. Brahms, Piano Concerto no. 2, op. 83, III, mm. 16-18



- b) Anthology, no. 43, Fanny Mendelssohn, "Bitte," mm. 15-19
- c) Example 27.24. This example features an embellishing +6 chord, which, however, is not in root position. What is the exact label for this chord?

Σ Example 27.24

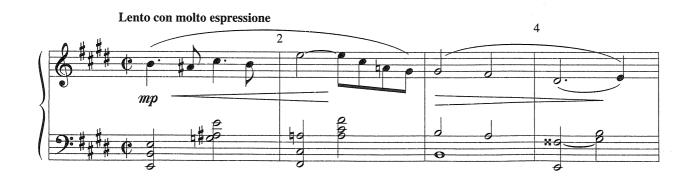
F. Chopin, Mazurka 45 in Am, op. posth. 67, no. 4, mm. 1–8



d) Example 27.25

Example 27.25

N. Dett, "Song of the Shrine," from Enchantment, II, mm. 1-4



EXERCISE 2

- 1. List the six triads (or keys) related by chromatic third to each of the following triads (or keys). Write down both the triad name and the RN that indicates its relationship with the original triad.
- 2. Then circle the four triads that have a CT with the original triad.

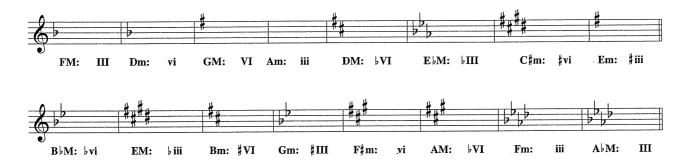
EM:

B♭M:

F#m:

Dm:

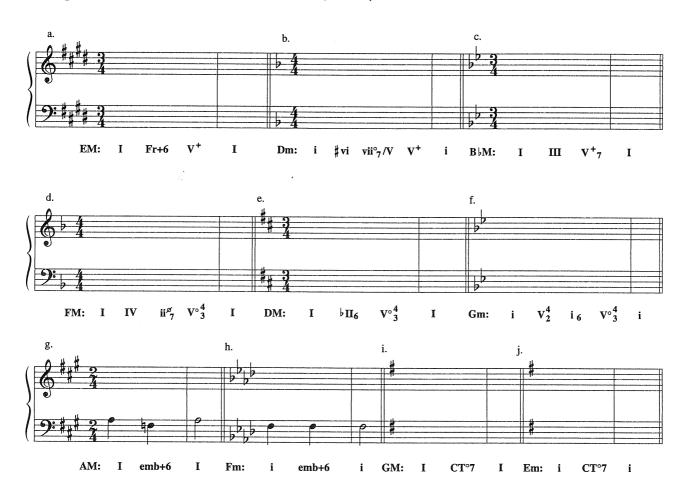
EXERCISE 3 Write each of the following triads (chromatic mediants) in the required keys.



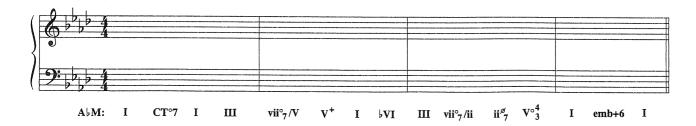
EXERCISE 4 Write a CT modulation in four voices, from GM to a key of your choice, related to GM by chromatic third. In the first key area (GM), use a tonicized bVI and a secondary vii°₇. In the second key area, use a Gr +6.



EXERCISE 5 Realize the following short progressions in four voices. Pay attention to the RN quality (uppercase or lowercase), which may denote a chromatic-third relationship (for instance, I–III is not the same, of course, as I–iii).



EXERCISE 6 Realize the following progression in four voices.



Chapter 28

Introduction to Large Forms

Large formal designs fall into several categories. Among these, the most standard types are sonata form and rondo, besides variation forms, which we already discussed in chapter 21. In this chapter we introduce the fundamental concepts involving sonata form and rondo, and we will study several examples of these formal types in some detail. Because of the wealth of possibilities they afford, however (and because different composers often treat them in different, idiosyncratic ways), a thorough discussion of these two large designs would require several chapters and is beyond the scope of this book. Students interested in furthering their study of large forms beyond the present introductory chapter should refer to any of the various available books devoted to the study of form.¹

Sonata form and rondo as standard formal designs were particularly favored by composers in the Classical period, especially for the first and last movements of sonatas, symphonies, and concertos. Both of these formal designs are derived from smaller forms we have already studied (binary and ternary, respectively), and both merge in a formal type that we will see at the end of this chapter, the sonata-rondo.

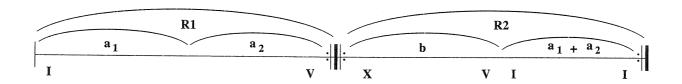
SONATA FORM

This formal type is most frequently found in the opening *allegro* movement of Classical and Romantic sonatas and symphonies, and also sometimes in the slow movement and the closing fast movement of the same genres. **Sonata form** is an outgrowth of the

^{&#}x27;I particularly recommend Douglass Green's Form in Tonal Music for a study of large forms in general. For studies that focus more specifically on formal designs in the Classical period, you may consult William Caplin's Classical Form, James Hepokoski and Warren Darcy's Elements of Sonata Theory (Oxford: Oxford University Press, 2006), Charles Rosen's Sonata Forms (New York: Norton, 1988), and Leonard Ratner's Classic Music: Expression, Form, and Style (New York: Schirmer, 1980).

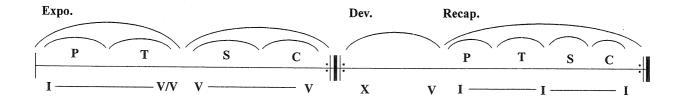
Example 28.1a

A Rounded Binary Formal Design



Example 28.1b

A Sonata Form Design



familiar rounded binary form, dominant type, as illustrated by example 28.1 (we are referring here to the type of rounded binary in which the complete first reprise comes back at the end of the second reprise). In both cases, the harmonic process consists of (1) establishment of the tonic key, (2) movement away from the tonic key and establishment of a secondary key area, (3) an area of harmonic instability that leads to (4) a return of the tonic key.

- 1. The first reprise of binary now becomes the **exposition.** As a general principle, the exposition contains two key areas (in the classical sonata form usually I and V, or i and III), which we will label **P** (for **primary**) and **S** (for **secondary**). P and S may each include a characteristic theme or a group of themes (which we will label P₁, P₂, etc., and S₁, S₂, etc.). Although the motion to a secondary key area is an essential element in the exposition, the existence of an independent S theme is not (although the S theme is most frequently independent from the P theme). In what we know as a monothematic sonata form (frequently favored by Haydn), the S key area is based on a transposition of the P theme.
- 2. Between P and S is usually a *modulating transition*, which we will label T. T may include its own theme (**independent transition**), or may use thematic material from P (**dependent transition**). T usually (although not always) ends with a half cadence (HC) in the secondary key. The frequently active rhythmic character of the transition as well as its modulating harmonic content create a drive toward this cadence around the middle of the exposition. The cadence itself has the double

function of marking the end of the first part of the exposition while opening the tonal space for the second part, the S area.2

- 3. The S area closes with a perfect authentic cadence (PAC) in the secondary key, V or III. This cadence may itself be followed by a closing section (possibly with its own theme) which confirms the secondary key area. Our label for the closing section will be C. A closing section comes after a clearly articulated cadence closing the last theme of the S area, and its function is to reinforce the important cadence at the end of the exposition, often by means of a chain of cadential gestures.
- 4. The second reprise of binary becomes, in sonata form, a large unit with two harmonic areas: (1) the **development** (corresponding with the first section of reprise 2 [R2] in rounded binary), a modulating, harmonically unstable area in which thematic material from the exposition may be developed (and new thematic material may be introduced); and (2) the recapitulation, usually (but not always!) a return of the complete exposition, only that now it is in the tonic key throughout (that is, T and S stay in the primary key, although here we must also say "usually but not always"!).
- 5. A great variety of developmental techniques may be found in developmental sections. Some of these may include fragmentation, sequence (on a circle of 5ths), thematic expansion or compression (either intervallically or rhythmically), variation, contrapuntal combination of different motives, textural changes, reharmonization, and so forth. You may want to review our study of developmental procedures in chapter 12. Before the recapitulation, and leading into it, there is usually a dominant prolongation, which we call retransition.
- 6. The motion to the secondary key area in the exposition and the harmonically unstable development create an extended area of dramatic tension that is resolved in the recapitulation. Although in the recapitulation there may be various tonicized areas (in particular, the subdominant is sometimes tonicized in the transition section of the recapitulation), this final large section in a sonata form is an area of tonal stability, which essentially stays in the tonic key. From a tonal point of view, the recapitulation provides a sense of balance and symmetrical proportions to the complete movement, following the familiar scheme "establishment of tonic (stability)departure from tonic (instability)-return to tonic (stability)."
- 7. At the end of the recapitulation there may be a coda, which either extends the final cadence or, at times, becomes a second development, including modulations to new key areas, before finally reaching a closing cadence on the tonic.

We should emphasize that the criteria we have just provided are no more than generalizations. Exceptions to almost everything stated in these criteria do abound, as can be expected in a musical design as complex and rich in possibilities as sonata form. Any analysis of movements following this formal design thus requires some creative interpretation and a lot of flexibility, as we will soon realize. We will now study several specific sonata form movements in some detail.

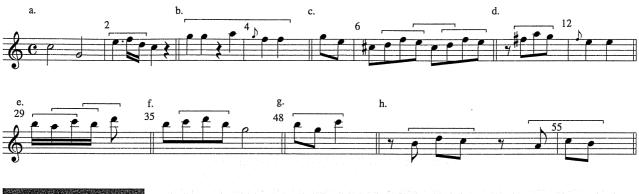
² For a study of different types of midexposition cadences and their role within the complete exposition, see James Hepokoski and Warren Darcy, "The Medial Caesura and its Role in the Eighteenth-Century Sonata Exposition," Music Theory Spectrum 19 (Fall 1997): 155-83. See also their Elements of Sonata Theory.

MOZART, PIANO SONATA IN CM, K. 309, I (ANTHOLOGY, NO. 25)

- 1. The Exposition (mm. 1–58). First, listen to the complete movement. Then listen to the exposition again, marking the key areas as you listen. You will hear clearly that the secondary key area in GM (V) begins in m. 35, and that the section in mm. 21–32 is the modulating area, T.
 - a) Primary key area (P). The tonic area extends from m. 1 to the cadence on C in m. 21. How many different themes can you identify? The opening theme, P₁ (mm. 1–8), clearly establishes the tonic key in the first two measures and is restated in mm. 8–14 (in a **counterstatement**, or repeated statement of a theme). Notice that m. 8 functions both as end of the first statement and beginning of the second (an *elision*). A second theme (still in CM, but now beginning on vi), P₂, starts in m. 15, and leads to the PAC in mm. 20–21. Discuss the phrase structure for the complete P area (mm. 1–21).
 - b) Transition (T). A new theme, and a new accompaniment figure, mark the beginning of the modulating and independent transition, T (mm. 21–32). Where exactly does the modulation from CM to GM take place, and how? The transition closes on a HC in GM (that is, on V/V), which leads to the beginning of the secondary key area in GM. Notice the dramatic pause in m. 32, after the strong HC in G, which prepares and emphasizes the coming of the new theme. Hepokoski and Darcy have studied this type of transition (which results in what they call a **two-part exposition**) at length. They write: "The two-part exposition is characterized by a strong mid-expositional punctuation break, the *medial caesura*—most often articulating a half cadence—followed (almost invariably) by a rhetorical drop to *piano* marking the onset of a gentle, usually contrasting secondary-theme zone in the second key-area." As you can easily verify, this narrative applies fully to the sonata we are analyzing.
 - c) Secondary key area (S). Two measures extending V/V (mm. 33–34) introduce us to the S area, in m. 35. Two open statements of an initial GM theme (S₁) appear in mm. 35–42. As is often the case with S themes, S₁ is here contrasting with respect to P₁. Whereas the latter is characterized by a loud, energetic, and angular beginning gesture, S₁ is softer and more lyrical, as characterized in the definition of a two-part exposition we just quoted above. A new theme (S₂) is introduced in m. 43 and restated with variation in mm. 46–47. A cadential process that begins in m. 48 eventually leads to the extended cadential gesture of mm. 51–54.
 - d) Closing theme (C). Following the cadence in m. 54 (which could certainly close the exposition) a final, closing theme (C) functions as a codetta or cadential extension. C also has a parallel structure, including a second statement (mm. 56–57) which varies the first statement. How exactly does it do so?
 - e) *Thematic relationships*. If you look closely at the various themes in this exposition, you will notice a motive that recurs in most of them: a step in one direction

³ Hepokoski and Darcy, "The Medial Caesura," p. 117.

♪ Example 28.2



♪ Example 28.3



followed by a 3rd leap in the opposite direction or the other way around. Using a 2 or a 3 to designate a second or a third, and + or - signs for up or down, the possibilities are +2-3, -2+3, +3-2, or -3+2. The most prominent occurrences of this motive, including motives from the P, S, T, and C areas, are illustrated in example 28.2. The motive provides a connection among all of them. Notice also the connections between the S themes, illustrated in example 28.3. How is the motive in m. 45 (example 28.3c) related to m. 35 (example 28.3a)?

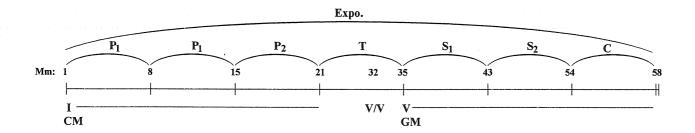
- 2. The development (mm. 59–93). Listen to the development section. Identify the key areas and the origin of the thematic material used in this section. What developmental techniques are used? When does the recapitulation really begin?
 - a) Measures 59–62 are in Gm, and state P₁.
 - b) Measures 63–66 move toward Dm. What is the origin of this theme? Is it a new theme? Or could it be derived from mm. 3–4?
 - c) P₁ is stated in Dm in mm. 67–68, after which we move toward Am.
 - d) A new section, beginning in m. 73, treats P₁ sequentially. What key areas are touched in mm. 73–82? Can you identify an example of thematic fragmentation in these measures?
 - e) The C section (closing theme) is stated in complete form, but now in Am, in mm. 82–85, leading to an apparent recapitulation (return of the first theme) in

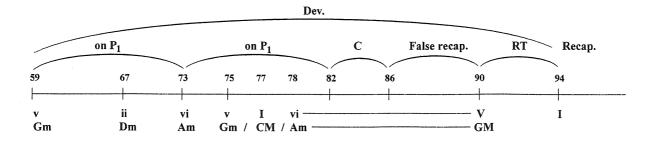
- m. 86. This is, however, what is known as a **false recapitulation**, a return of the "right theme" but in the "wrong key," in this case Am.
- f) Measures 90–93, a statement of P_1 outlining V_7 of CM, function as a *retransition* (RT), a dominant prolongation leading to the return of the tonic key.
- g) The true recapitulation comes in m. 94, the return of P₁ in CM.
- 3. The recapitulation (mm. 94–155). Listen to the complete second reprise (development and recapitulation). Compare the recapitulation with the exposition, and determine what is the same and what is different. You will find the following discrepancies between these two sections:
 - a) Mozart varies the counterstatement of P₁ in the recapitulation (mm. 101–108). How? Analyze this passage harmonically if you have not done so yet.
 - b) Unlike many T sections in recapitulations, the T section here does modulate to the key of the dominant. The difference with the original T section, however, is that now it does not lead to a HC in GM, as it did in m. 32, but rather to a cadence on the tonicized G. How does this change in the cadential pitch at the end of T affect the S area in the recapitulation?
 - c) What is the key of the S area now? How does Mozart vary the S₁ theme?

As a conclusion of your analysis, study the formal diagram for the exposition and the development provided in example 28.4. Discuss how this diagram represents the tonal and formal design of this movement in particular and of sonata form in general.

Example 28.4

Formal Diagram for Mozart, K. 309, I





The following are guided analyses of two compositions in sonata form included in the anthology: Beethoven's Fm Sonata, op. 2, no. 1, I, and his celebrated *Waldstein* Sonata, I. Their most significant formal and tonal features are pointed out to help you work through these fascinating movements.

Beethoven, Piano Sonata No. 1 in Fm, op. 2, No. 1, I (anthology, no. 32)

- 1. Identify the modulating T area. Is it based on an independent theme? What sets apart the P area from T?
- 2. The S area begins in m. 20 with the S_1 theme. As usual in a classical sonata of the standard minor key type, S is in the key of III. What is unusual about the harmonization of S_1 ? When is the first time we hear III unequivocally in root position?
- 3. Compare the P theme with the S₁ theme. How are they similar, contrasting, or complementary? Think in terms of shape and contour.
- 4. We may call the theme in mm. 33–41 the S_2 theme, and the new theme after the PAC on III (m. 41) the C theme.
- 5. Study the development (mm. 49–101). What are its sections, and what themes are they based on? What are the various key areas? We have studied some of the tonal features of this development in previous chapters as examples of modulation. Review and discuss these features again, focusing especially on the following points:
 - a) Explain the modulation from AlM to Fm in mm. 52–55.
 - b) What familiar modulating/developmental process takes place in mm. 63–74?
- 6. By m. 78 we are back in Fm, and in m. 81 we reach V in this key. For how long is this V prolonged? What is the function and name of this extended dominant prolongation? Where does it lead to?
- 7. How do you explain harmonically the interesting seconds in the bass, mm. 94–100?
- 8. Are there any discrepancies between the recapitulation and the exposition?
- 9. The final cadence could be in mm. 145-146. How is it delayed? What chords are tonicized in these final measures?

Beethoven, Piano Sonata No. 21 in CM, Waldstein, op. 53, I (anthology, no. 35)

The Waldstein Sonata is one of the masterpieces of Beethoven's middle period. The following comments will guide you through the analysis of its monumental first movement in sonata form.

1. The exposition.

- a) Analyze phrase 1 harmonically (mm. 1–4). What is unusual about this harmonic beginning? How is CM established? Does phrase 2 (mm. 5–8) confirm the tonic key? (What secondary key areas do phrase 1 and phrase 2 actually represent? What are the chords within each of these two areas?) Where is the first V–I progression in CM?
- b) In mm. 7-11 notice the fluctuation between the FM (as V of Bb) and Fm chords (and hence between Ab and Ab, 6 and b6). In mm. 12-14 you will also see the juxtaposition of Cm and CM. More of these M/m complexes will appear later in the movement.
- c) What is the formal function of mm. 14–21? What secondary key areas are represented here, and what are the chords within each area?
- d) Explain (or review) the modulation in mm. 21–23. Measures 23–34 function as the T section. What harmony is prolonged here?
- e) S₁ begins in m. 35. We have already seen that in his middle and late periods, Beethoven, like the Romantic composers after him, often preferred third-related keys over the functionally stronger fifth relationships favored in the Classical period. Explain how this applies to the S area in this sonata.
- f) Explain mm. 43–50 from a formal/thematic point of view.
- g) A new theme, S₂, appears in mm. 50–53. Brilliant keyboard figuration beginning in m. 58 leads to an extended cadential gesture in mm. 66–74.
- h) The brief section that follows functions as a codetta, C.
- i) Comment on the many counterstatements in this exposition. Are they literal or varied? What effect do they have on the length and scope of the exposition?
- j) Focus now on thematic relationships.
 - 1) The contour of P, in mm. 1–3, features two intervals: the 3rd, and the P5. How is it balanced by the motive in m. 4?
 - 2) The T area has two clear sections: mm. 23–30 and 31–34. How are they related thematically to P?

- 3) How is S_1 related to P, and how does it balance the contour of mm. 1–3?
- 4) The thematic relationship of S₂ with the previous themes is more obscure. Consider, however, the notes on beats 1 and 3 in mm. 50–51, along with the B in m. 52. How does the resulting line balance S₁?
- 5) Finally, comment on the C theme (mm. 74-77).
- 2. The development. The development can be broken up into several harmonic areas, as suggested by the following points:
 - a) Explain the modulating process that leads from the closing C section in EM to FM in m. 90.
 - b) FM/m is an important key complex throughout the development (Remember the 6/b6, as well as CM/m juxtapositions in the opening measures!). You can think of mm. 90–104 as being in F and of the two other key areas in this section as secondary key areas of F. Which are these key areas, and how do they relate to F? Explain the thematic development in these measures. Where do the two motives in mm. 96–103 come from?
 - c) A fast-moving harmonic and linear process takes place in mm. 104–112. Because it leads from i in Fm (m. 104) to V in FM (m. 112), this is also an extension of the F complex of keys. Review the linear process in mm. 105–109, and understand how it functions harmonically (a circle of 5ths) and linearly (a $\frac{4-6}{3}$ sequence). What is the chord that precedes the arrival on V of F in m. 112?
 - d) The modulating process in mm. 116–136 begins with a series of 5th-related key areas (FM–BbM–Ebm) and continues with two common-tone (CT) modulations. The first of these, Ebm to Bm (i-vi spelled enharmonically), involves two keys related by chromatic 3rd (mm. 124–128). The second modulation, up a half step from Bm to Cm (mm. 128–132), uses two common tones between the tonic chord of the first key and the dominant of the second key. Verify each of these modulations and understand the CT procedure in each of them.
 - e) What harmony is reached in m. 136? What is the formal/harmonic function of mm. 136–155? What happens in m. 156?
- 3. The recapitulation. In the first place, notice the length of what is left after this point: We are in m. 156, and we have 146 more measures to go! Comment on everything that is different between the recapitulation and the exposition.
 - a) What is the function of the newly added mm. 169-173?

- b) We would now expect the S area to be in CM, and T to be nonmodulating. What do we find instead? How does the present key of S₁ provide a tonal balance to the key of S₁ in the exposition (with respect to the tonic key, CM)?
- c) Comment on the key of S₂ and C.
- d) A surprising series of events takes place after m. 245. After the C theme cadences in CM, we could expect some kind of conclusive gesture to end the movement. What we get is fifty-seven measures of coda!
- 4. The coda as a second development
 - a) First, the C theme is extended through a modulation to Fm, as it did at the beginning of the development.
 - In mm. 247–248, V₇ of Fm resolves deceptively to a statement of P in D
 M (the Neapolitan key used as a "coda key").
 - c) We soon realize that Beethoven launched into an unexpected second development in the place of the coda. Notice, however, that this new development does not stray very far from CM, and that, as a matter of fact, it has a "cadential character" if we consider its long-range tonal motion. Let us examine some of its details:
 - 1) What key areas are touched upon in the first section of the development (mm. 249–259)? What familiar linear technique can you identify in the left hand of mm. 255–256? This first section, which started in the Neapolitan key (a "predominant function"), leads to the half cadence on V of CM in m. 259. (What chord does Beethoven use, in m. 258, to approach this important HC?)
 - 2) What part of P which was not used in the first development is developed now, in mm. 259 and following? The development in mm. 261–275 is largely based on sequences. Examine mm. 261–267, then 267–270, then 270–271, and finally 272–274, and explain the use of sequential techniques in these passages. From a harmonic point of view, this whole area (from m. 259 to 278) is a long motion from V in CM to, again, V in CM (mm. 278–283).
 - 3) A possible final cadence is set up again in mm. 282–283. The new surprise is a final statement of S₁, now in the tonic key which we were expecting in the recapitulation!
 - 4) We pointed out, in the opening measures and in the development section, the fluctuation between FM and Fm (resulting in a fluctuation between A\(\frac{1}{2}\) and A\(\frac{1}{2}\)). How does this fluctuation between \(\hat{6}\)

- and $\frac{1}{6}$ reappear in the extended half cadence in mm. 290–294?
- 5) A final statement of P, which recalls the very beginning of the exposition, finally closes this astonishing example of sonata form. Here, again, notice the final tonicization of the subdominant, and its appearance, once more, as an FM/m complex stressing the ô/bô fluctuation!

This discussion closes our study of sonata form. What is your impression of this movement? How does Beethoven achieve its monumental scope? How does it conform to, and how does it depart from, the standard sonata form design? What makes this movement so interesting and unpredictable? Do you understand the movement and its complexities better after this analysis?

EXERCISE

To practice analyzing a movement in sonata form, refer to exercise 1 in worksheet 28 at the end of this chapter.



THE RONDO

Listen to Haydn's Piano Sonata in DM, Hob. XVI:37, III (anthology, no. 21), an example of rondo form. You will recognize its character as typical of last movements in classical sonatas, concertos, and symphonies: It has a fast tempo, and its mood is light and playful. From a formal point of view, the **rondo** is usually simpler than the sonata form. The basic principle of a rondo is the recurrence of a **refrain**, which alternates with contrasting **episodes**. The contrast may be thematic, and also tonal: Whereas the refrain in a rondo *is always in the tonic key*, the episodes may be in different keys. Some authors prefer the term **couplets** for these contrasting areas, to avoid confusion with fugal episodes.

The simplest formal type that fits this definition is, of course, the familiar ternary form (or aria form), with an ABA design. Rondo form is indeed an outgrowth of ternary. Haydn's rondo is what we know as a five-part rondo, which, in its most frequent form, can be summarized as ABACA. Refrains in a rondo are closed harmonically and are often in binary form. The second episode (the C section), which tends to be larger, sometimes includes changes of tempo and meter and may have a developmental character. We may find a modulating transition (T) to connect the refrain with an episode, and a retransition (RT) to return to the refrain. Possible formal and tonal schemes for a five-part rondo appear in example 28.5.

↓ Example 28.5

Five-Part Rondo Designs

A	В	A	C RT	A
			ii VI	
I I i i			IV IV V I iv iv V i	

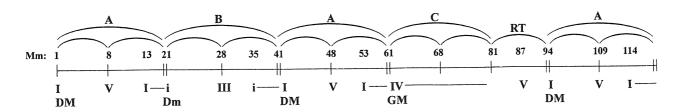
A FIVE-PART RONDO: HAYDN, PIANO SONATA IN DM, HOB. XVI:37, III (ANTHOLOGY, NO. 21)

- 1. The refrain. When you listened to this piece you may have realized that mm. 1–20 constitute a closed formal unit, which returns later in a literal form (mm. 41–60) and in a slightly varied form (mm. 94–134). This is the recurring A section of this **five-part rondo**, its refrain. You may also have realized that this refrain is in rounded binary form, dominant type. Explain exactly what makes it so. Review, if necessary, the chapter on binary and ternary forms, and make sure you are familiar with all the types of binary before you continue the study of rondo. Explain exactly how the last return of A is varied (mm. 94–134).
- 2. Episode 1. The first contrasting episode, the B section (mm. 21–40), is in the parallel minor key, Dm. What is the form of this episode (be exact as to the specific formal design)? Explain how the thematic material in this section is contrasting with respect to the refrain. On the other hand, do the themes have anything in common (such as contour, important pitches, characteristic leaps, etc.)?
- 3. *Episode* 2. After the literal return of the refrain, the second episode (the C section, mm. 61–80), introduces the contrasting (but close) key of GM, the subdominant key. The form of this section is rounded binary, tonic type, in which the complete first reprise returns at the end of the second reprise. What is the harmonic and formal function of the section in mm. 81–93, and what term do we use for such a section?

A formal diagram showing formal relationships and key areas for this rondo appears in example 28.6. Study it and understand how it represents the form of the piece we have just analyzed.

Example 28.6

Formal Diagram for Haydn, Hob. XVI:37, III



GUIDED STUDIES OF RONDO FORMS

Haydn's five-part rondo is a simple example of this formal type. We will now study two more complex instances: a seven-part rondo by Beethoven and a sonata-rondo by Mozart. The format for these studies will be the same that we used in our "Guided Studies" of sonata form: These may be done as class discussions, following the analytical guidelines provided by the following comments and questions.

I. A Seven-Part Rondo: Beethoven, Piano Sonata in Cm, op. 13 ("Pathétique"), III (anthology, no. 34)

In a seven-part rondo, one more episode and refrain are added to the five parts we are already familiar with. A hypothetical formal design would be ABACADA. More often, however, the last three sections mirror the first three, in a design such as ABACAB'A, where the third episode is a return, perhaps varied, of the first episode. Example 28.7 shows some possible designs for this formal type.

In example 28.7 we see that the first three and last three parts are often grouped tonally, whereas the second episode (the middle part) is the one that is likely to feature the greatest tonal contrast, and the one that allows for the largest variety of choices. We will now see how this general formal type is represented by Beethoven's "Pathétique" rondo.

- 1. The refrain (mm. 1–17). Study and discuss the phrase structure for the opening section of this movement, the refrain (mm. 1–17). How many phrases are there in this section? How are they related thematically? We have already studied the subsequent modulating transition to E♭M, III, through the secondary key area of iv, and leading to the B section, the first episode in E♭M (review this discussion in chapter 18, in the section, "Secondary Key Areas").
- 2. Episode 1 (mm. 25–61). This is a rich episode from a thematic point of view. Where have we seen, earlier in this movement, the characteristic rhythm for its initial theme (mm. 25 and following)? The second theme of this

episode, in m. 37, features the motive $\hat{1}-\hat{2}-\hat{3}-\hat{2}-\hat{1}$ (in triplets). Is this contour derived in any way from the opening theme (see mm. 1–2, including the initial anacrusic motive)? The third theme, on the other hand, presents a truly contrasting character (mm. 44–50). Comment on aspects of this theme. Notice also how many times Beethoven has already used a certain chord to approach an important dominant harmony: What are the chords in mm. 6 (beat 2), 32 (beat 1), and 46 (beat 2)?

The theme in triplets returns in m. 51, now in a section with a transitional function (to modulate back to Cm), leading to the literal return of the refrain (mm. 62–78).

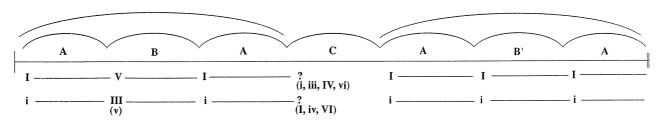
3. Episode 2 (mm. 79–120). In essence, this episode is a set of variations on a four-measure theme in two voices (mm. 79–82). Explain what these variations are exactly, and how many of them there are. Notice also the contrapuntal character of this C section, and the abrupt change of key from Cm to AbM in mm. 78–79. What common element between these two keys allows for such a direct (and yet smooth) modulation? On the surface, the theme of this episode seems new and contrasting. How is it derived, however, from the opening theme? Refer specifically to mm. 5–6.

The last variation (mm. 103–106) leads into a long prolongation of the Cm dominant (mm. 107–120). How do we call this type of prolongation, and where does it take us?

4. Episode 3 (mm. 134–170). The refrain that begins in m. 121 is not stated in its complete original form. How is its "third phrase" varied (mm. 129–133)? One might think that it functions as a modulating transition; actually, there is no "modulation," because the third episode is in the parallel major key, CM (beginning in m. 134). What is the chord leading to the new episode in m. 133 (beat 2)? Now compare episode 3 with episode 1. Other than the keys, is there any difference between them? Is episode 3 a D section, or rather a B' section? Is there any reminiscence of the key from episode 1 (EbM) in mm. 158–166?



Seven-Part Rondo Designs



5. The final refrain and the coda. The final return of the refrain takes place in mm. 171–182. In what form does the third phrase of the refrain appear (mm. 179–182)? Are the original pitches there?

The cadence of this return is reached in m. 182. The additional section is a coda extending this Cm cadence. On what theme are mm. 182–193 based? And mm. 193–198 (notice the overlapping P4s, G–D/F–C)? The coda concludes with a surprising return of the initial theme in a last-minute recall of the key from episode 2, AbM (VI). Review this interesting modulation which we already studied: What is the pivot chord function of the chord in m. 198? What kind of enharmonic reinterpretation takes place in m. 206, introducing the return of Cm only for the striking final cadence?

Study the formal/tonal diagram in example 28.8. How does it reflect the design of this movement? Does it conform to the standard designs of seven-part rondo that appear in example 28.7?

II. A Sonata-Rondo: Mozart, Piano Sonata in BbM, K. 333, III (anthology, no. 28)

Listen to, and analyze, Mozart's B\(\text{M} \) rondo. It represents a formal type in which sonata form and seven-part rondo merge: **the sonata-rondo.** Go back to example 28.7, the diagram for the seven-part rondo formal types. The sonata-rondo is a logical consequence of this design: If the initial A and B sections are the primary and secondary key areas (P and S) in a sonata form exposition (with an added return of A in the tonic key), if the C section becomes a development, and if the final A-B'-A sections, all in the tonic key, function as the recapitulation, you will easily see how the two formal types (sonata and rondo) come together in this hybrid which we call sonata-rondo form (see example 28.9).

1. The exposition. In Mozart's B♭M rondo, the exposition comprises the sections from m. 1 to m. 64. The refrain (mm. 1–16) is followed by a modulating, transitional

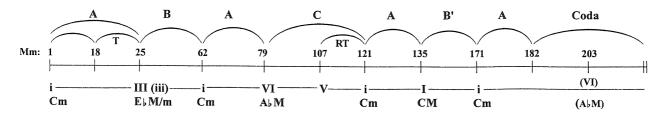
- theme (T, mm. 16–24), leading to the secondary key area (the B section or first episode) in FM (V), mm. 24–36. A brief retransition (mm. 36–40) takes us to the return of the complete refrain in BbM, mm. 41–56. The transitional theme now modulates to Gm (the relative minor) in mm. 56–64.
- 2. The development. The second episode, the C section, begins in m. 65, with its own new theme in Gm. After a new modulation to ElM (IV), the section in mm. 76–105 has a clear developmental character. Why? What are the secondary key areas in this section? What previous themes are developed? What is the harmonic function of mm. 105–111? What do these measures lead to?
- The recapitulation. The complete refrain returns, in BbM, in mm. 112-127. The extended T section (mm. 127-148) now does not lead to FM, but rather to the prolonged BbM dominant in mm. 144-148, which launches the return of the B section, now in the tonic key (mm. 148-171). After the brief cadenzalike passage in mm. 171-172 (a lead-in or Eingang, an improvisational passage used, especially in concertos, to introduce or lead into a solo passage or a return of an important theme), the refrain seems to return, for what should be the last appearance of the A section. Instead, we soon hear a new modulation to V (mm. 177–179), which begins an unexpected second development (the supposed return was, then, a false return)! What theme or motive is this development based on? Could you think of this second development as an extended prolongation of FM, the dominant of BbM? If so, what is its tonal function in the long-range design of the movement?

A new, longer lead-in on V finally takes us to the true return of the refrain in m. 200, followed by a cadential section (mm. 207–214) and by a closing coda (which briefly tonicizes the subdominant key) in mm. 215–225.

Provide a formal-tonal diagram for this movement, showing all the main and secondary key areas and how they correspond with major formal divisions.

Example 28.8

Formal Diagram for Beethoven, op. 13, III



PRACTICAL APPLICATION AND DISCUSSION

Because the formal types we have studied in this chapter are essential in the Classical period, and to a certain extent also in the Romantic period, you will encounter them very often (and must certainly have come across them already) in your career as a performer, composer, or scholar.

What do you think is the significance of what you have learned in this chapter? How will it affect your understanding of complete movements? Do you think understanding the form, tonal plan, and thematic relationships of a large movement is important to you as a musician and performer? How? Will your knowledge of form affect the way you approach a large movement from now on, whether to listen to it or to perform it? The type of analysis we have demonstrated in this chapter tells us not only about sectional divisions and thematic connections, but also about long-range harmonic motion, directed harmonic tension, and tonal design. This allows you to hear large movements as single formal and tonal units, held together by underlying tonal structures that provide their coherence and forward drive. Are these concepts important to a performer? Discuss why and how (or why not and how not).

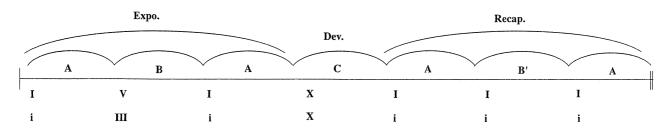
If anyone in the class is currently performing a movement in either sonata or rondo form, he or she may wish to perform it for the class and perhaps explain its formal and tonal characteristics. In any case, if you are a performer you can find a movement in either sonata or rondo form and play through it yourself. What has your new knowledge of form added to your understanding of this movement? How has it affected your performance of it or the way you hear it?

The following are some of the specific questions relating to sonata form which you may want to address in your discussion:

- 1. How can you enhance the transitional character of the T section to contribute to the urgency toward the S key area and theme?
- 2. How are the P and S themes different and contrasting in character, and how can you best emphasize the differences?
- 3. Can you contribute through your performance to the sense of instability and tonal motion of the development? What can you do to make sure that the tension and the sense of direction are kept throughout the development until they reach their goal (the return of the tonic key at the beginning of the recapitulation)?
- 4. How can you try to convince listeners that a "false recapitulation" is the real one, so that the effect of the real recapitulation is heightened?
- 5. The tension accumulated throughout the secondary key area and the development is resolved with the return of the tonic key and the opening theme at the beginning of the recapitulation. How can you enhance the structural significance of this important moment in a sonata form movement?
- 6. On the other hand, the rest of the recapitulation may be a long area of tonal stability. How can you make sure that you keep the level of musical motion and interest high now that you don't have the support of thematic development and unstable harmonic activity to create tension and excitement?



Sonata-Rondo Designs





EXERCISE

For an assignment of an analytical paper on a movement in sonata-rondo form, refer to exercise 2 in worksheet 28 at the end of this chapter.

ASSIGNMENT

For analytical assignments based on the materials learned in this chapter, refer to chapter 28 in the workbook.

Terms for Review

Sonata form Two-part exposition Exposition False recapitulation

Primary key area Rondo
Secondary key area Refrain
P and S themes Episodes

Transition: dependent, independent
Closing section
Transition
Development
Recapitulation
Retransition
Retransition
Seven-part rondo
Coda
Sonata-rondo

Second development Lead-in (Eingang)

Counterstatement False return

Worksheet 28



EXERCISE 1 Analyze Beethoven's Piano Sonata op. 10, no. 1, I, in sonata form. Turn in an annotated copy of the score (the score and the recording will be available at your music library). You should indicate the thematic/sectional content of the complete movement using the letter symbols we have learned in this chapter (P, T, S, C, etc.), and all keys and key areas for the complete movement.

Provide a formal diagram for the complete movement, and answer the following questions:

1. Exposition

a) Measures 1–30, according to their formal and thematic function, are best described as:

Explain the thematic content of these measures (which constitute a period) by phrases (how many phrases? how are they related?).

b) Measures 32-56 are best described as:

If we divide this s	ection into five har	monic units, tl	ne key areas	defined by the
four first units are	as follows: mm. 32-	-36,;	mm. 37–40,	; mm.
41–44,; r	nm. 45–48,	The harmon	ic function o	f mm. 48–55 is
, leading	into a new section i	n m. 56, in the	key of	Name in a Colombia de la Colombia de

What is typical of Beethoven in the way the key areas in this section are related?

c) Briefly explain the sectional/thematic/harmonic content of the rest of the exposition. Is it all one section, or does it break up into several subsections?

2. Development

a) Explain the thematic content of the complete development (use the letter D to indicate any possible new theme in the development).

- b) Indicate, with measure numbers, the five key areas clearly established in mm. 106–142, including m. 142. (Be careful: Dominants are not keys, they are only dominants! Keys are defined by the resolution of the dominant to the tonic.)
- c) Indicate the key areas at mm. 142-156, and explain their relationship.
- d) The harmonic/formal function of mm. 158–167 is (explain and provide the exact *term*):
- 3. Recapitulation. Compare the recapitulation with the exposition. What is the same in both sections? What are the differences?

EXERCISE 2 Write a short analytical paper on Beethoven's Piano Sonata in GM, op. 31, no. 1, III, in sonata-rondo form. The score and a recording will be available at your music library. The score can also be found in the Arlin anthology (*Music Sources*). You can use the guided analyses of Beethoven's and Mozart's rondos in this chapter as models for the organization of your paper. Turn in an annotated copy of the score.

The following are some specific questions about this particular movement by Beethoven which you should address in your paper.

- 1. What is interesting harmonically about the beginning?
- 2. Is there a T section between the tonic and dominant key areas in the exposition?
- 3. What contrapuntal technique is used in mm. 86–90? Where does this section lead?
- 4. What is the formal function of the C section (the second episode)? Discuss the harmonic processes in this section (mm. 98–129), with mention of all the specific key areas.
- 5. Is there a retransition after the C section? What chord does Beethoven use to approach this important point of formal articulation?
- 6. Is there a coda?
- 7. Beethoven uses variation techniques in several sections of this movement. Explain how this statement applies in mm. 1–32, 66–82, and 132–164. Compare also mm. 140–147 with 156–164.
- 8. Provide a formal diagram for the complete movement.

Chapter 29

Expanding Functional Tonality: Extended Tertian Chords; Linear Chromaticism II

Composers throughout the common practice period expanded the basic harmonic vocabulary in a variety of ways. In this chapter we examine two of the means used for this expansion of tonality. First, we will focus on extended tertian chords, which allow for both diatonic and chromatic expansions of functional sonorities and which introduce, in either case, strong elements of dissonance. In the second part of the chapter we will further our study of linear chromaticism, and we will see that diatonic frames can be expanded through both sequential and nonsequential chromaticism.

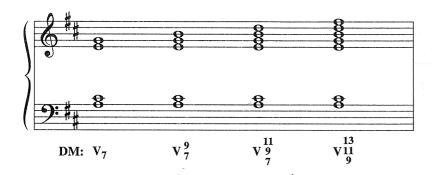
EXPANDING CHORDAL SONORITIES: EXTENDED TERTIAN CHORDS

The harmonic event illustrated in example 29.2a is familiar enough to you: The ninth of a 9–8 suspension over a V_7 chord resolves, as expected, before the bass has moved on to the next chord. In example 29.2b, on the other hand, the same ninth does not resolve before the bass moves, but rather resolves along with the bass into the next chord. In this latter case, we can say that the ninth is part of the chord, which thus becomes a **ninth chord** on V, or V_7^9 . The origin of this chord is linear, as shown by example 29.2a. As an independent chordal sonority (example 29.2b) it still often functions as a linear chord. Occasionally, however, the ninth chord is used as an independent, nonlinear chord, which results from adding one more third on top of a seventh chord, as shown in example 29.1. If we add one more third on top of the ninth chord, we will have an **eleventh chord**, and yet one more third will produce a **thirteenth chord**, both shown in example 29.1. These chords as a family are normally called **extended tertian chords**.

All of these chords have several things in common:

- 1. They are highly dissonant and, most often, they are treated as such (the dissonance is resolved in some conventional manner, and sometimes, but not always, is also prepared).
- 2. They are most often used with a dominant function, although they can also appear, as we will see, on any degree of the scale besides 5.

Example 29.1



- 3. In musical practice we do not always find these chords in their complete form. Although they are often written in more than four voices (usually five, or at times more), in four-voice textures some pitches need to be left out. The seventh, however, is usually not left out in any of these chords.
- 4. Extended tertian chords usually appear in root position. Inversions of these chords are very rarely found in music.

We will now examine these characteristics as they apply to each of the specific extended tertian chords.

Ninth Chords

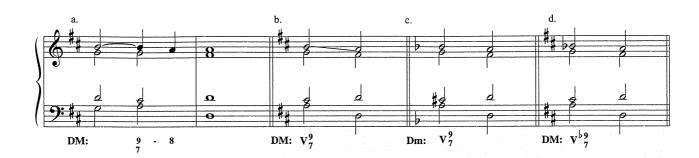
The dominant ninth is the most frequent of all extended tertian chords. The characteristics of the dominant ninth are as follows:

- 1. In a four-voice texture, the *fifth of the chord is omitted*, and the seventh is included.
- 2. The ninth (as well as the seventh) resolves down by step.
- 3. In the diatonic form of this chord, the ninth is major in major keys (6) and minor in minor keys (16). The M9th chord V⁹₇ is indeed normally found only in major keys. The m9th chord, on the other hand (V¹⁹₇), can actually be used in both minor and major keys. In major keys, this is properly a "borrowed" chord, because of the use of 16.
- 4. The ninth of the chord should at least be at the distance of a 9th above the bass (that is, it should not be a second above the bass).

Verify all the preceding points in example 29.2. Play or sing through these examples, and hear the dissonance of the 9th, its resolution, and whether the 9th is major or minor.

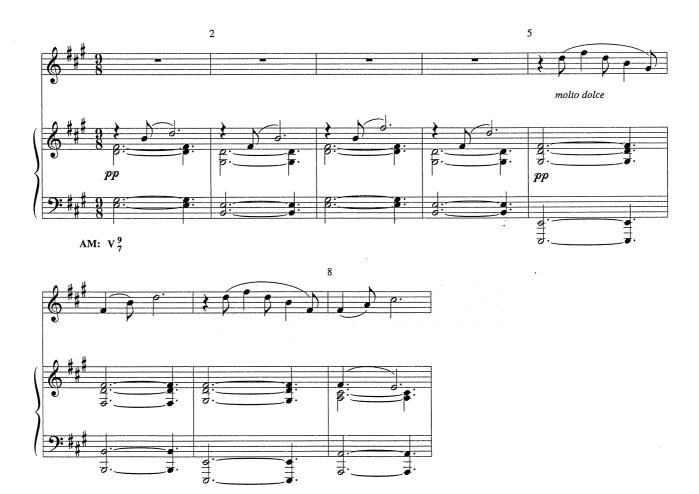
Franck began his sonata for violin and piano with a V_7^9 in AM, as illustrated in example 29.3. Identify all the members of this chord in the example. Is the chord complete? What actual pitch is the ninth? The chord is extended through m. 5. How? What kind of harmonic gesture takes place in mm. 6–8? Where is the V_7^9 actually resolved? Comment on the resolution of the ninth.

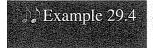
🛴 Example 29.2



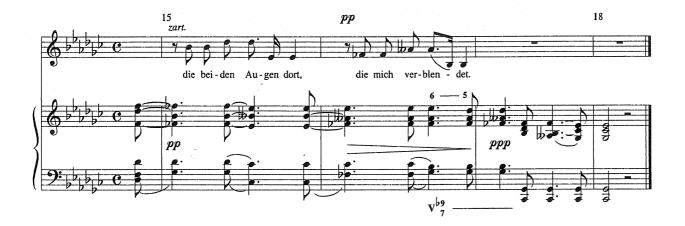
Example 29.3

C. Franck, Sonata for Violin and Piano, I, mm. 1–8





Hugo Wolf, "Der Mond hat eine schwere Klag' erhoben," from *Italienisches Liederbuch*, mm. 15–18



In the Franck example the ninth is major, which in a major key is a diatonic pitch. Now listen to the Hugo Wolf fragment in example 29.4, in C\(\beta\)M. Focus first on the cadence, beginning with the G\(\beta\) chord in m. 16. The upper voice in the piano (E\(\beta\)-D\(\beta\)) is a simple 6–5 motion over the bass. You can see the actual dominant chord in the last eighth note of m. 16 and the first beat of m. 17. What kind of a ninth chord is this? What scale degree is A\(\beta\) in C\(\beta\)M?

Now study the progression in mm. 15–16, leading to the $V_7^{\flat g}$ which we just analyzed. You will recognize a circle-of-5ths bass ($D\flat - G\flat - C\flat - F\flat$) supporting a progression made up of three consecutive dominants leading to the pre-dominant on $F\flat$. One of these chords is a secondary V_7^g chord. Which one, and what is the exact Roman numeral (RN) for it?

Eleventh and Thirteenth Chords

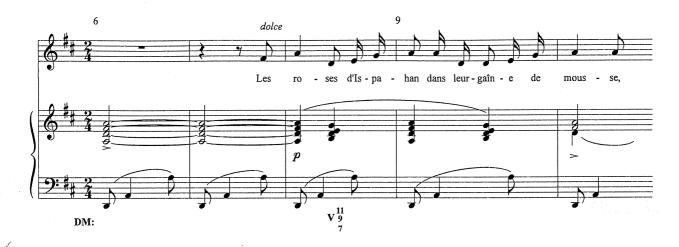
Listen now to example 29.5. The only two chords in this excerpt are a DM tonic chord and a linear chord that functions as a neighbor chord to the DM tonic. If you try to organize this chord in thirds over the bass note A $(\hat{5})$, you will find out that it can indeed be interpreted as a linear dominant chord. As a dominant harmony, the chord is missing the third (the C#), and it includes instead a seventh, a ninth, and an eleventh (think of the interval of 11th as a compound 4th). By this functional interpretation, this is a V^{11} chord.

Dominant eleventh chords are normally spelled according to the following conventions, especially in four voices:

- 1. The 11th in an eleventh chord should be an 11th (not a 4th) above the bass.
- 2. Because the pitch an 11th above $\hat{5}$ in V_{11} is actually $\hat{1}$, the third $(\hat{7})$ is usually omitted in this chord to avoid the harsh clash between the leading tone $(\hat{7})$ and $\hat{1}$.

Example 29.5

G. Fauré, Les roses d'Ispahan, op. 39, no. 4, mm. 6-10

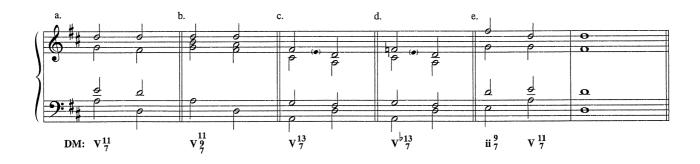


- 3. In four voices, one more pitch must also be omitted. The two possibilities for the eleventh chord are root-fifth-seventh-eleventh (V_7^{11} , as in example 29.6a) or root-seventh-ninth-eleventh (V_7^{11} chord, as in example 29.6b).
- 4. In the resolution of the V_{11} chord to the tonic chord, the eleventh stays in the same voice as a common tone with the tonic (1).

In examples 29.6c and d we see yet another type of extended tertian chord, the *dominant thirteenth chord*. Examine the use of this chord by Chopin in example 29.7a. Then, read the following basic principles for writing the dominant thirteenth chord:

- 1. In this chord, neither the third nor the seventh is left out. Its most frequent form in four voices is, then, V_7^{13} .
- 2. The thirteenth (think of it as a compound sixth) may be major (3) or minor (3), and it should always be a 13th (not a 6th) above the bass.

Example 29.6

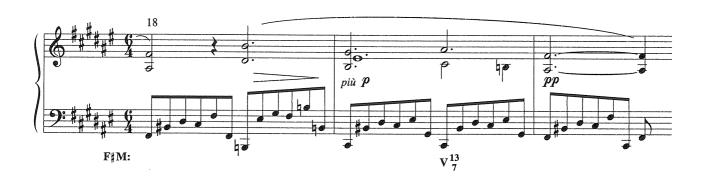


3. The thirteenth usually resolves by leaping down a third to 1. This leap is often bridged by a passing tone, as suggested in examples 29.6c and d. Occasionally, the thirteenth may also stay in the same voice as a common tone with the tonic, as you can see in example 29.7c.

Study the cadence in example 29.7b (mm. 127–129) by Alma Mahler. Identify the exact type of dominant chord (don't forget to take into account the voice part), and comment on its resolution. (We will study the first measure of this example later in this chapter.) The cadence in example 29.7c also includes a V_1^{13} , and in this case the thirteenth stays in the same voice as a common tone with the tonic. What other extended dominant chord can you find in this passage? This phrase also illustrates how, in jazz and popular music, extended tertian sonorities are an essential component of harmony. Notice how many dominant and nondominant extended chords (which we will study in

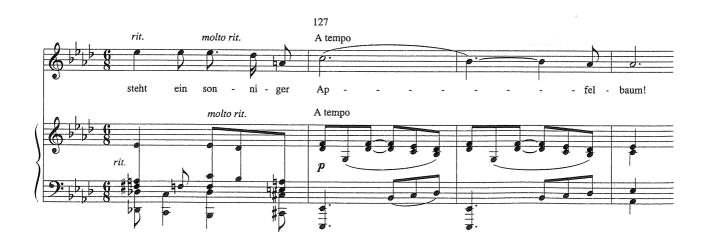
Example 29.7a

F. Chopin, Prelude in F#M, op. 28, no. 13, mm. 18-20



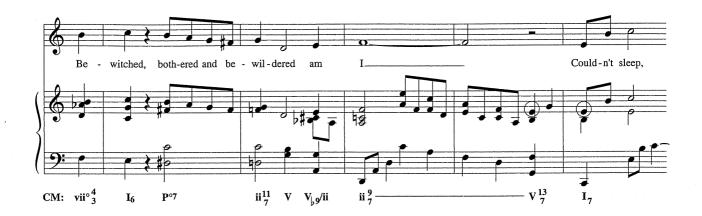
Example 29.7b

A. Mahler, "In meines Vaters Garten," from Five Songs, no. 2, mm. 126-129



Example 29.7c

Lorenz Hart-Richard Rodgers, "Bewitched," from *Pal Joey* (cadence in chorus)



the next section) are featured in this example. As a final observation on this passage, comment on the passing °7 chord (P°7) in m. 1. In chapter 27 we studied another linear °7 chord, the CT °7 chord. Explain the linear nature of the P°7 in this example and specifically how it functions as a passing chord.

EXERCISE

To practice spelling and resolving dominant ninth, eleventh, and thirteenth chords, refer to exercise 2 in worksheet 29 at the end of this chapter.



Nondominant Extended Tertian Chords

As we previously mentioned, extended tertian chords can also have nondominant functions. In late nineteenth-century and twentieth-century music it is not rare to find ninth, eleventh, or thirteenth chords on any degree of the scale, including the tonic. Example 29.6e shows a progression using such chords. In general, the same spacing and voice-leading principles that apply to dominant ninths, elevenths, or thirteenths also apply to nondominant extended tertian chords. Verify spacing, voice leading, and treatment of dissonance in example 29.6e.

Two examples from the literature will illustrate these chords. The opening phrase from Kurt Weill's "Mack the Knife" does not contain a single unextended triad (example 29.8). As we just mentioned, seventh and extended tertian chords are the basic harmonic vocabulary of jazz and popular music, as this example well illustrates.

Notice that although the functional content of this phrase is quite simple (in essence, V–I–ii–V–I), the progression is greatly enriched by means of tertian dissonance applied to each of the three basic functions (tonic, pre-dominant, and dominant). Mary Lou Williams's fragment in example 29.9, on the other hand, includes an area of tonicization

Example 29.8

Marc Blitzstein-Bertolt Brecht-Kurt Weill, "Mack the Knife," from *The Threepenny Opera* (opening phrase)



Example 29.9

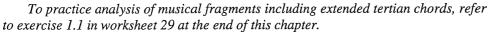
Mary Lou Williams, Nite Life, mm. 5-9



in which both the secondary dominant and the tonicized chord (V/VI and VI) are extended tertian sonorities. Identify both the secondary dominant and the tonicized chord and what kind of sonorities they constitute. Then examine example 29.7c again, and discuss the nondominant tertian chords in that phrase.

EXERCISES

To practice realizing progressions including a variety of extended tertian chords, refer to exercises 3 and 4 in worksheet 29 at the end of this chapter.





LINEAR CHROMATICISM II: LINEAR EXPANSIONS OF TONALITY

In chapter 27 we discussed a category of chromatic chords that result from linear motion (see section "Linear Chromaticism I: Linear Chromatic Chords"). We will now continue our study of linear chromaticism, focusing mainly on extended sequential and nonsequential processes that have the effect of expanding tonality.

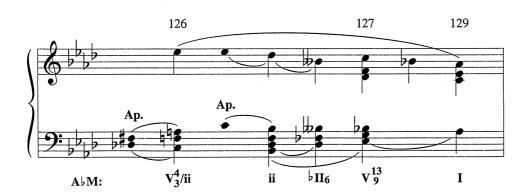
APPOGGIATURA CHORDS

A factor that often contributes to the expansion of tonality in the late nineteenth century is the extensive use of nonchord tones (NCTs), especially appoggiaturas, which in turn create linear, nonfunctional sonorities. **Appoggiatura chords** are dissonant sonorities, often placed on downbeats, generated by melodic appoggiaturas. We can see illustrations of appoggiatura chords in some of the preceding examples in this chapter.

Look, for instance, at Alma Mahler's phrase in example 29.7b. The harmony in the first measure, m. 126, seems highly complex and chromatic. Now play the chordal reduction in example 29.10. In AlM, it turns out to be a simple tonicization of ii

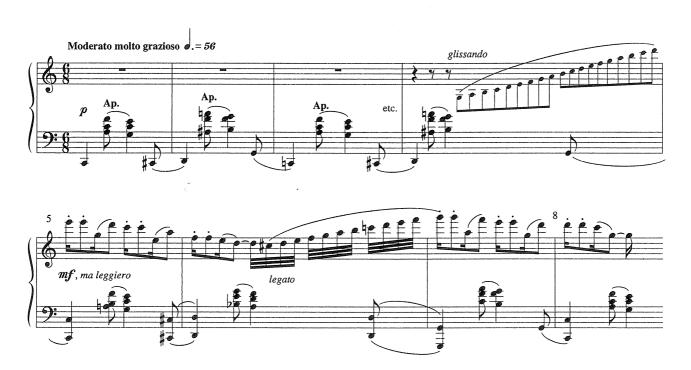
Example 29.10

Reduction of Example 27.7b



Example 29.11

N. Dett, Barcarolle, from In the Bottoms, mm. 1-8



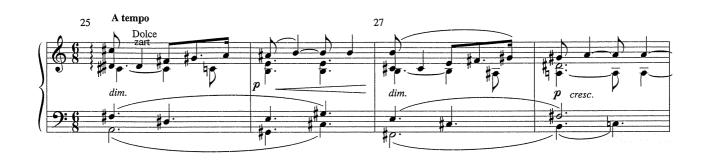
followed by a \$\int_6\$ pre-dominant chord. What is it that makes this measure so chromatic and complex? Basically, all the appoggiaturas that create two appoggiatura chords (marked "Ap." on the graph, and notated without stems). Notice also the spelling of \$\int_6\$ on the score. How is it spelled? Now refer to the Wolf fragment in example 29.4. The last two measures contain only two functional chords: a dominant and a tonic. Can you explain the role of appoggiaturas and appoggiatura chords in this cadence?

Appoggiatura chords do not necessarily have to fall on the downbeats. The harmonization of the phrase by Dett reproduced in example 29.11 is strongly based on the principle of appoggiatura chords, and all of them are placed on a weak fraction of the beat (unaccented appoggiaturas). Play through the example, and notice how a simple functional progression is enriched by all the linear dissonance produced by the appoggiatura chords.

Now play through the short passage by Richard Wagner in example 29.12a. Think of it in EM. What is the role of nonchord tones, and specifically appoggiaturas, in this passage? Circle all of them on the score, and then try to reduce this texture to a functional chordal progression in block chords (a metric reduction). You will end up with a fairly simple progression, which you can verify in example 29.12b. You can see that most of the wonderful dissonant tension in this phrase is produced melodically by chromatic nonchord tones, one of the salient characteristics in the music of Richard Wagner. In m. 27 you can interpret the B\(\text{\

Example 29.12a

R. Wagner, Tristan und Isolde, Prelude to act I, mm. 25-28



Metric Reduction



end of this measure is an anticipation, although it does not actually anticipate a chord tone in the next chord, but rather an appoggiatura.

CHROMATIC SEQUENCES REVISITED

In chapter 18 we studied the most usual types of **chromatic sequences.** Because chromatic sequences can suspend tonality momentarily, they are often used by Romantic and post-Romantic composers to enrich and expand their tonal structures. We will now review some of the most characteristic types of chromatic sequences in the context of linear expansions of tonality.

THE DESCENDING CIRCLE-OF-5THS SEQUENCE

As we know from chapter 18, if the successive chords in a descending circle of 5ths are all secondary dominants, the sequence is chromatic, and two of the voices feature descending chromatic lines. You can find this type of progression in examples 18.15b, d, e, and f. For a review of this sequence, refer to examples 29.13a and b. In example 29.13a,

the succession of secondary dominants is in root position. Notice the two chromatic lines that result. If one of the two chromatic lines is placed in the bass, as in example 29.13b, the progression takes the form of alternating $\frac{4}{5}$ and $\frac{6}{5}$ chords.

Study mm. 32–37 from anthology, no. 45 (Chopin, Mazurka no. 49 in Fm). These measures are the continuation of a phrase in Cm which begins in m. 27. After the half cadence in m. 31, we hear a chromatic sequence that takes us through successive tonicizations of G, C, F, Bb, and Eb. A metric reduction of this passage appears in example 29.13c. Play through the reduction, and then discuss how the circle of 5ths is enriched by extensive use of chromatic nonchord tones.



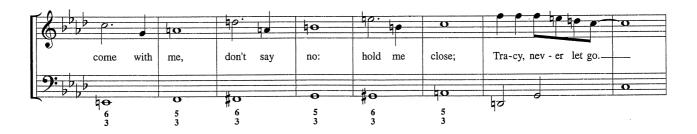
The Ascending 5-6 (or 6-5) Sequence

The chromatic sequence by ascending 2nds has already appeared in example 18.17. This pattern consists of an alternation of secondary dominants and their resolutions, with a resulting bass line that alternates a 4th up and a 3rd down (example 29.14a). If the secondary chords are in first inversion, then we have a chromatic line in the bass, above which $\frac{6}{3}$ (or $\frac{6}{5}$) and $\frac{5}{3}$ chords alternate, as in example 29.14b. A simple case of this sequential pattern appears in example 29.14c, where the sequence involves only triads $(\frac{6}{3}-\frac{5}{3})$ rather than seventh chords. The same pattern (now in $\frac{6}{5}-\frac{5}{3}$ form) can also be

Examples 29.14a and b



Example 29.14c Paul Vance–Lee Pockriss (The Cuff Links), "Tracy" (refrain)



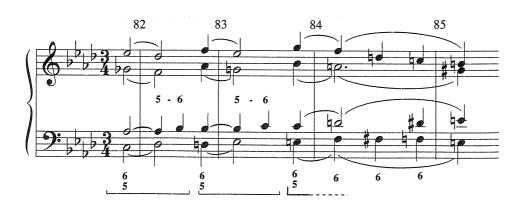
found underlying another fragment by Chopin reproduced in example 29.15a. First, verify in mm. 81-84 the basic ${}_5^6-{}_3^5$ pattern in this sequence. Then notice how this linear pattern is embellished in a variety of ways. In the first place, the ${}_5^5$ chords (the resolutions of the secondary dominants) are themselves elaborated by means of 5–6 figures. Moreover, the complete texture is ornamented with chromatic nonchord tones. Study the reduction in example 29.15b, and identify all the NCTs in the actual music.

Example 29.15a

F. Chopin, Mazurka no. 37 in AlM, op. 59, no. 2, mm. 81–89



Example 29.15b

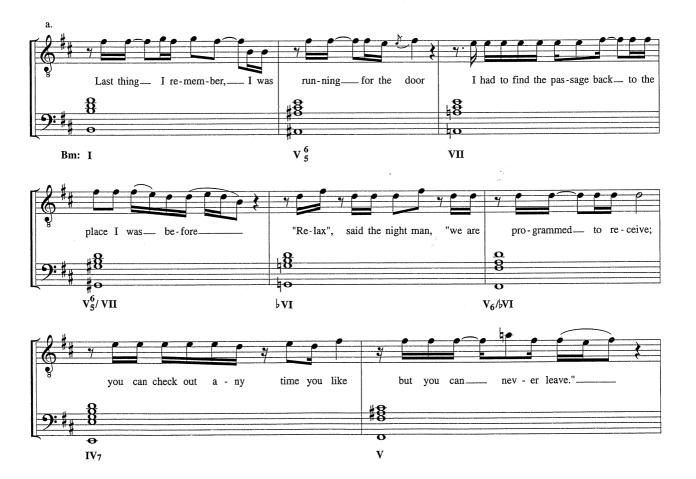


The Descending 5-6 Sequence

Whereas the basic voice leading in the 5–6 sequences we just discussed involves an ascending 5–6 or 6–5 sequential pattern, the equivalent descending 5–6 pattern over a chromatic bass is also very effective musically, as shown by the well-known excerpt in example 29.16a. As in the ascending 5–6 pattern, the sequence may involve only triads, and then the pattern results from alternating $\frac{5}{3}$ and $\frac{6}{5}$ chords over a chromatic bass (as in example 29.16b), or it may instead alternate $\frac{5}{3}$ and $\frac{6}{5}$ chords (as in both examples 29.16a and c).

Example 29.16a

Don Feldes-Don Henley-Glenn Frey (The Eagles), "Hotel California" (final verse)



Examples 29.16b and c



The $^{7}_{5}$ Sequence

In example 29.17a you can recognize a standard 7-6 sequential pattern. While the 7th is sounding (the suspension), the only other pitch other than the bass is the third above it. In example 29.17b, you will see a slight change to this sequence: While the 7th is sounding, you also have a 3rd and a 5th above the bass; that is, you hear a complete $\frac{5}{3}$ "suspension" chord. Now look at the resolution of the 7th to the 6th: To avoid the clash of the 6th with the 5th which was sounding before it, this 5th "gets out of the way," while the 3rd is sustained. The result is a $\frac{7}{3}$ - $\frac{6}{3}$ sequential pattern, which makes for an interesting and rich linear passage. Play through or listen to the Mozart passage in example 29.18a, and note that example 29.17b is simply a metric reduction of the Mozart example. Explain how the progression is elaborated in the music by means of NCTs.

Now play through example 29.17c. What in Mozart was a mostly diatonic sequential pattern, here becomes a highly chromatic linear phrase. But in essence the pattern is the same: a $\frac{5}{5}$ - $\frac{6}{3}$ sequence. The only real difference is that the bass moves chromatically at the same time as the 7th resolves to the 6th. Understand how this linear pattern works. Then, play through Wagner's phrase in example 29.18b, and verify that example 29.17c is its metric reduction. As you did with the Mozart example, explain the role of chromatic NCTs to enrich and elaborate this progression (in this case, quite extensively so!).

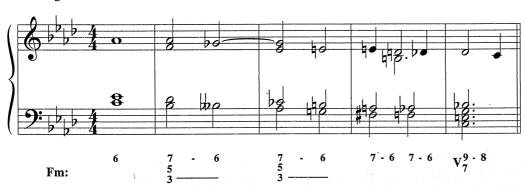
Finally, look at example 29.17d. The pattern here is essentially the same, but the 5th of the $\frac{5}{3}$ sonority now moves to a 4th above the same bass. The result is a $\frac{7}{3}$ sequential pattern, in which both sonorities involved are seventh chords. Play this example, and then study how it represents a metric reduction of anthology, no. 45 (Chopin, Mazurka no. 49, in Fm), mm. 37–40. The Chopin phrase enriches this sequence in a variety of ways: It contains numerous chromatic NCTs, as well as voice exchanges in every measure, involving the soprano and tenor voices. Discuss these aspects of this example carefully. Observe also that the last " $\frac{7}{3}$ " is actually spelled, and functions, as an +6th chord in Fm. It is interesting to realize that all three passages we just studied (the Mozart, Wagner, and Chopin phrases) consist of linear passages leading to dominant harmonies.



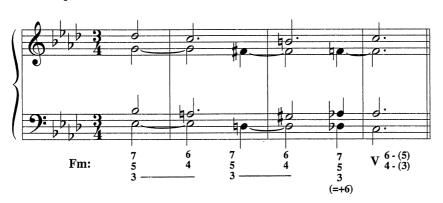
b. Mozart



c. Wagner

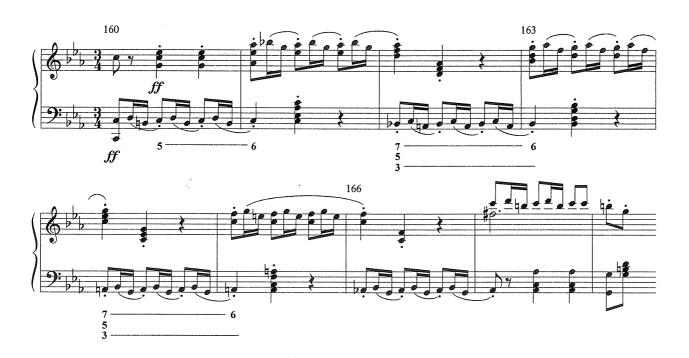


d. Chopin



Example 29.18a

W. A. Mozart, Symphony no. 39, I, mm. 160-168



😓 Example 29.18b

R. Wagner, Tristan und Isolde, Prelude to act III, mm. 11-15





EXERCISES

To practice realizing sequential progressions, refer to exercises 5 and 6 in worksheet 29 at the end of this chapter.

To practice analysis of musical fragments including chromatic sequences, refer to exercise 1.2 in worksheet 29 at the end of this chapter.

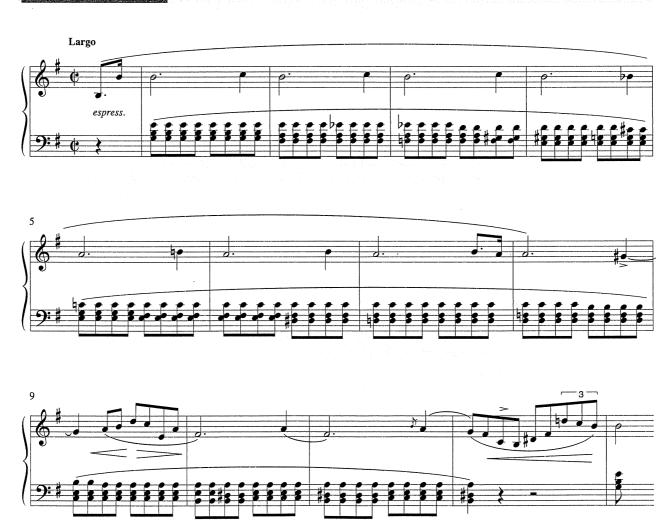
NONSEQUENTIAL LINEAR PROCESSES

We will now study a type of linear/harmonic process often used by Chopin and other composers in the second half of the nineteenth century. Listen to example 29.19, and pay attention to its harmonic content. Does it sound functional to you? How are chords connected? The piece is in Em, but what are the clear signs of an Em tonality? What is it that tells us clearly that we are in Em?

After you listen to the excerpt, play through example 29.20a. Does the piece begin with a clear Em chord? Is Em clearly defined by a dominant-tonic progression? The

☑**〉** Example 29.19

F. Chopin, Prelude in Em, op. 28, no. 4, mm. 1–13

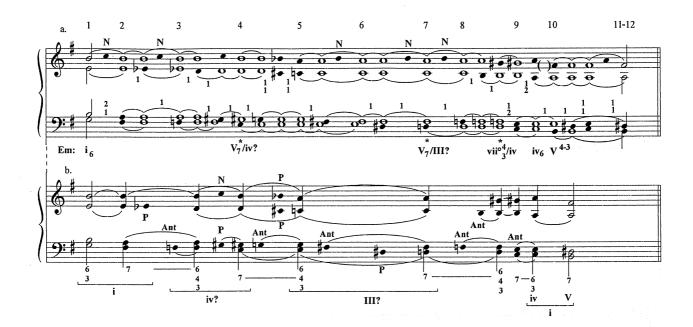


following comments and concepts will help you understand the harmonic processes involved in this composition.

- 1. The basic frame for the phrase is provided by the outer voices. The melodic line is based on a NN motive, which outlines either a half step (B–C–B) or a whole step (A–B–A). In any case, and especially in its half-step form, this "sigh" motive gives the melody a character of mourning and grief. This character is confirmed by the bass line, which first outlines a chromatic descending tetrachord (G down to D), that is, a "lament bass," followed by several statements of the C–B half-step sigh.¹
- 2. *Implied tonality*. The piece begins with a tonic chord in first inversion, a weak form of the tonic. There is no other Em triad in the complete passage, and there is not a clear dominant of Em until the half cadence in m.12. In other words, although we hear the phrase as being in Em, the key is **implied** rather than established.
- V₇, and these two harmonies are connected through a succession of nonfunctional chords. This process illustrates the principle of **tonal parenthesis**: Although the beginning and end of the phrase tell us we are in Em, the harmonies within the phrase do not define the key in any clear way from a functional point of view. The tonal motion for this passage can thus be expressed as i₆—()–V₇.
- 4. Linear chromaticism. What we find filling in the parenthesis, instead of a functional progression, is an area of linear chromaticism which actually provides tonal coherence to the passage by prolonging the initial tonic chord linearly. Looking at example 29.20a, how would you define the constructive principle of this type of linear chromaticism? In this example, the pitch or pitches that move from one chord to the next are represented as black note heads, and the pitches that remain are notated as white notes. The figures between the two staves refer to half-step voice leading: a 1 means motion by half step (1 semitone), a 2 means motion by step (2 semitones). We will think of the motivic neighbor figure in the melody (right hand, B–C–B) as a melodic NN, except where it is clearly part of the voice leading for a vertical sonority, as in m. 3.
- 5. Voice leading as a constructive principle. At a glance, we see that chord connections are based on *stepwise motion* in one or two voices at a time, and the remaining voices sustain *common tones*. Stepwise motion is mostly by descending half step, although in some cases also by whole step. Chromatic voice leading is thus the defining feature in this passage.
- 6. Implied tonal regions. As was mentioned above, a Roman numeral functional analysis of this passage does not yield any kind of logical result. Chords are not connected functionally, but linearly. We have an initial harmony (i₆), a final harmony (V₇), and we travel the space between them through linear, mostly chromatic voice leading. At some points, however, we can hear momentary tonal points of

¹ For an analysis of this piece which includes interesting discussions of its affective characteristics and of the linear design underlying its structure, see Carl Schachter, "The Triad as Place and Action," *Music Theory Spectrum* 17 (Fall 1995): 149–69.

Chapter 29



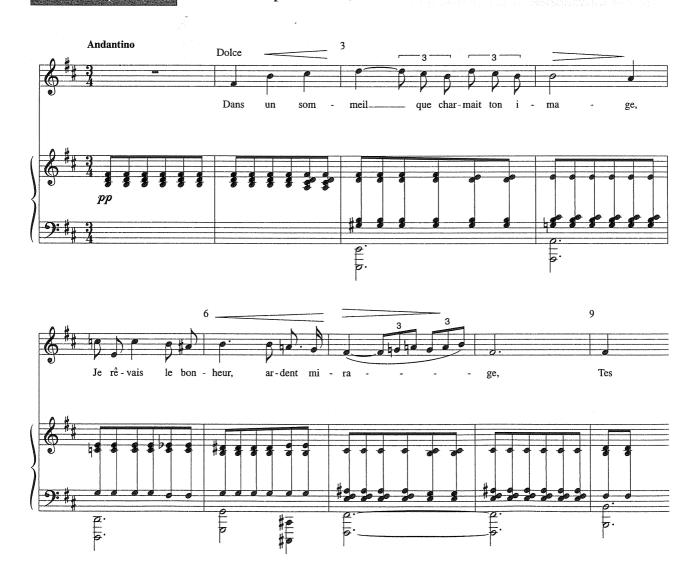
reference, especially when we fall on a Mm_7 sonority which seems to want to resolve to a tonicized degree. The first chord in m. 4, for instance, can be heard as a V_7/iv , and the chord in m. 7 similarly appears as a V_7/III . In both cases, however, the tonicizing tendency is not confirmed or resolved, and the chords proceed linearly. These would be cases of *implied tonal regions*. Tonal regions are implied or suggested by means of their dominants, but they are not confirmed by a resolution to the tonic.

7. Underlying structure. Example 29.20b shows a chordal reduction of this passage, charting a linear path through a possible underlying progression of implied tonal areas. In this graph, the opening and closing chords are shown as half notes, the significant chords within the phrase are shown as quarter notes, and the connecting linear elaborations (anticipations, neighbor notes, and passing tones) are shown without stems. The graph allows us to make several interesting observations. In the first place we notice that, after all, we do find an underlying linear sequential pattern in this passage, the series of 7–6 suspensions indicated by the figures under the graph. We see, moreover, that the root motion of the stemmed chords in mm. 2–7 (F#–B–E–A–D) is the familiar circle of 5ths. The graph also shows how the underlying sequential structure is elaborated chromatically by means of anticipations, NNs, and PTs (passing tones), and that these linear elaborations (notated without stems in example 29.20b) are not sequential themselves. From a different perspective, if we group the $\frac{6}{2}$ -7 patterns in mm. 3–7, we see that each of these patterns can

be interpreted as implying a secondary key area (indicated as iv? and III? under the graph). Similarly, the final $^6_{3}$ -7 pattern in mm. 9–10 represents the goal chords for the phrase, a pre-dominant-dominant progression in Em.

Example 29.21 shows an interesting case of harmonization that brings together the linear principles we have just discussed with elements of functional tonality. The chordal voice leading is strictly linear, and very much in the style of the Chopin example. The bass, however, provides a strong functional anchoring: It is based on a circle of 5ths. In Fauré we often find this type of extended linear procedure over a functional bass, as in this case. First, play through the passage or listen to it. Then, discuss the

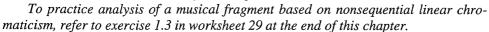
G. Fauré, "Après un rêve," mm. 1-9



voice leading in the piano's right hand. Then, analyze the passage functionally (with Roman numerals), with the understanding that each of the bass notes is the root of the chord above it. What key area is tonicized in mm. 3–4? What extended tertian sonorities can you identify in mm. 3–5? What is the triad on G in m. 6? How is the dominant chord in mm. 7–8 embellished linearly?

EXERCISES

To practice writing a passage using nonsequential linear chromaticism, refer to exercise 7 in worksheet 29 at the end of this chapter.





FOR FURTHER STUDY

For additional chapter 29 materials, refer to the Harmony in Context Web page at www.mhhe.com/roigfrancoli2e.

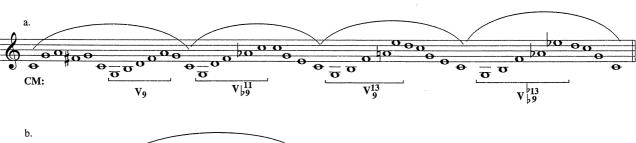
ASSIGNMENT AND KEYBOARD EXERCISES

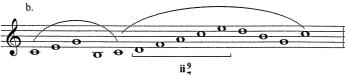
For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 29 in the workbook.

PITCH PATTERNS

Sing the pitch patterns in example 29.22, hearing their harmonic content. Pitch pattern a illustrates a variety of extended tertian sonorities. Pitch pattern c features a descending chromatic sequence and pattern d an ascending chromatic sequence. Finally, pattern e provides a summary of the nonsequential linear process found in Chopin's Em prelude.

Example 29.22







Terms for Review

Ninth chord
Eleventh chord
Thirteenth chord
Extended tertian chords
Nondominant extended tertian chords
Appoggiatura chords
Chromatic sequences

Circle-of-5ths sequence Ascending 5–6 sequence Descending 5–6 sequence $\frac{5-6}{5-3}$ sequence Implied tonality Tonal parenthesis

Worksheet 29

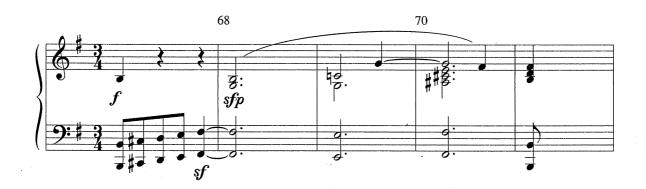


EXERCISE 1 Analysis.

- 1. The following passages include examples of extended tertian chords. Identify and label these chords, and verify the resolution of the dissonant chord members.
 - a) Refer back to worksheet 23, example 23.18 (Chopin, Mazurka in GM, op. 67, no. 1). What extended tertian chord can you identify in m. 43?
 - b) Example 29.23.

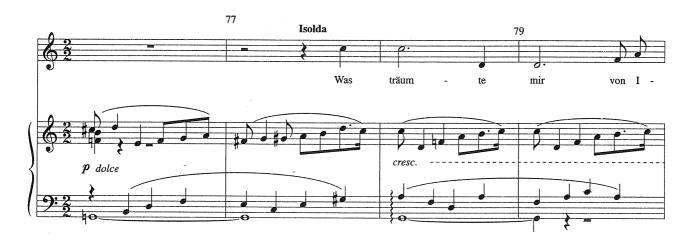
Example 29.23

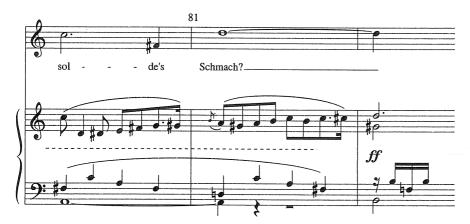
L. v. Beethoven, Piano Sonata in Em, op. 90, I, mm. 67-71



c) Example 29.24. Comment on the use of melodic chromaticism and appoggiaturas in this passage. Discuss whether the passage is in CM or GM. What is the function of, and exact label for, the chord in m. 78?

R. Wagner, Tristan und Isolde, act I, scene 5, mm. 76–82





- d) Analyze each of the parallel phrase beginnings in example 29.25 and determine their harmonic differences.
- e) Analyze mm. 13–21 of Amy Beach's *Ecstasy* (anthology, no. 59). The complete passage is in El-M. You will find several interesting examples of tonicization, extended tertian chords, and appoggiatura chords in this fragment.

R. Schumann, "Träumerei," from Scenes from Childhood, op. 15, no. 7



Continued



- 2. Analyze the following examples of chromatic sequences. Name the exact type of sequence, and provide the necessary figures to identify the sequential pattern.
 - a) Anthology, no. 14, Bach, Fugue in Cm, WTC, I, mm. 17-20.

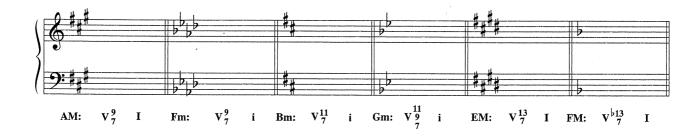
b) Example 29.26

- 1) Measures 11–16 can be analyzed as an extended $5^{7}_{3}^{6}_{4}$ sequence. The beginning of the sequence is labeled for you on the example. Analyze the rest of it. The sequence is not always straightforward: In some cases the third is delayed by a 4–3 suspension, and in some other cases one or more linear chords are introduced between the $\frac{7}{5}$ and its resolution to $\frac{6}{4}$. But the resolution actually takes place in all cases.
- 2) What extended tertian chords appear in m. 16, beats 3-4?
- 3. Study anthology, no. 45, Chopin, Mazurka 49 in Fm, mm. 1-15.
 - a) On a separate sheet, explain the linear process in mm. 1–8 using the same concepts we applied to the analysis of Chopin's Prelude no. 4 in Em. Provide a diagram for these measures similar to the graph in example 29.20a.
 - b) What is the main melodic difference between mm. 9-15 and mm. 1-8?
 - c) Explain the modulation to AM. How are the two keys related?

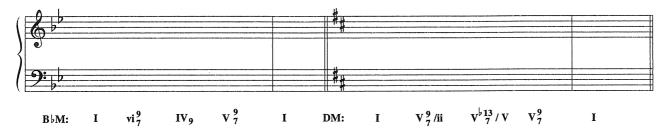
A. Beach, Sous les étoiles, op. 65, no. 4, mm. 11-18



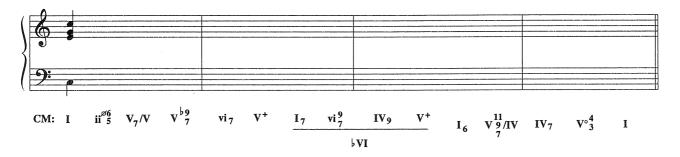
EXERCISE 2 Write and resolve the following extended tertian chords in four voices.



EXERCISE 3 Realize the short progressions in this exercise in four voices.

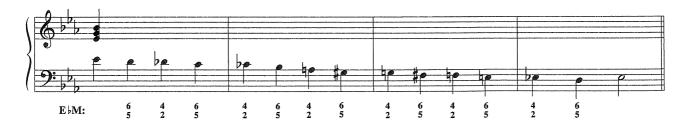


EXERCISE 4 Realize the following progression in four voices.

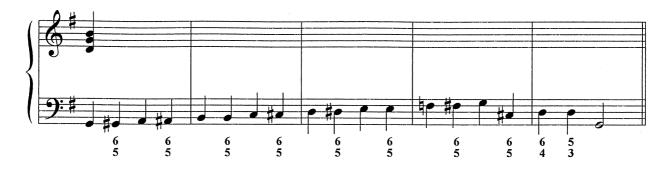


EXERCISE 5

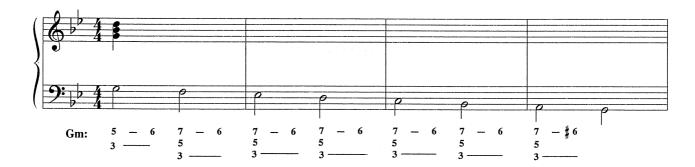
a) Realize the following sequential progression in four voices. Although accidentals have not been indicated in the figured bass, all chords should be inverted Mm_7 sonorities.



b) Realize the following sequential progression in four voices. All ⁶ chords should be inverted Mm₇ sonorities.



EXERCISE 6 Realize the following sequential progression in four voices. This is a diatonic sequence and all necessary accidentals are indicated in the figured bass.



EXERCISE 7 Write a progression in four voices using the same linear techniques we studied in Chopin's Prelude no. 4 in Em. Your progression will be in Gm, and although it will be similar to Chopin's, it should be different. Cover the path from i or i_6 to a final V or V_7 by means of stepwise voice leading (mostly by chromatic motion) and common tones. In this exercise you are illustrating the use of implied tonality, tonal parenthesis, linear chromaticism, and implied tonal regions. If possible, determine which underlying progression your linear chromaticism is elaborating (see example 29.20b for a model).



Chapter 30

The German Romantic *Lied*: Chromatic Harmony in Context

In this chapter we study representative examples of German *Lieder* (singular: *Lied*, "song"), the songs that constitute one of the most characteristic genres of the Romantic period. We will first focus in detail on two *Lieder* by Schubert and Schumann, and then we will analyze a song by Hugo Wolf to demonstrate modulation by enharmonic reinterpretation of the augmented triad. Many of the harmonic concepts we have learned in part 2 of this book, including various types of modulation to distantly related keys, will appear in the songs that we will study. For this reason, this chapter will also serve as a review of chromatic harmony in context.

THE GERMAN ROMANTIC LIED

Composers in the Classical period (such as Haydn, Mozart, and Beethoven) favored large formal structures driven by long-range tonal plans and extensive developmental processes, such as the ones we studied in chapter 28. Romantic composers, on the other hand, had an introspective interest in the soul, the passions, and the inner world of the individual. They often strove for *lyrical*, *intense poetic expression* through music. Some of the means they used for these expressive purposes were *lyrical melody*, *chromatic harmony*, and *harmonic color to depict mood*. The best vehicles for this intimate and subjective expression of emotions and moods were the "character piece" for piano (the typical Romantic short piano piece) and the song, the *Lied*.

The German *Lied* arose as a musical response and counterpart to the short lyrical poems by such major Romantic poets as Goethe and Schiller. Important composers of German Romantic *Lieder* are Franz Schubert (who composed over 600 songs), Fanny Mendelssohn, Robert and Clara Schumann, Josephine Lang, Pauline Viardot-García, Johannes Brahms, Hugo Wolf, Gustav and Alma Mahler, and Richard Strauss.

In principle, Romantic songs are a *musical expression of a poetic text*. This does not mean that the music necessarily follows the text in any particular way. A composer may choose, among other options, to depict the text musically in some detail (**text painting**), to depict or evoke only the general mood of the text, to give a personal interpretation

of the text through music by means of distortion or exaggeration, or simply to ignore the text and its poetic meaning. In any case, because text and music are two essential components that come together in song, and because the music is usually built around the words in one way or another, the structure and content of the song's text should as a principle be considered carefully before examining the music. Some frequent themes one finds in Romantic poetry, and hence in Romantic songs, are death or loss, unrequited love, melancholy, yearning for the impossible, the irrational, contradictory, or complex aspects of the soul, and the psychic, mysterious aspects of nature.

Formally, *Lieder* can be of many types. Formal types are usually small and non-developmental. Among the most frequent types are the **strophic form** (each stanza of text is set to the same music), **ternary** (usually ABA), **binary** (AB, with a possible repetition of both sections, ABAB), and **through-composed** (which does not include any clear return or repetitions of material).

We recommend the following general methodology in the analysis of songs:

- 1. *The text.* What is the meaning of the poem? What moods, situations, or emotions does it depict? How many characters are there? Who is speaking, and in which tone? What is the form of the poem? How many verses are there, and how are they grouped into stanzas?
- 2. The musical setting. In general terms, what are the musical characteristics of the song? What are the textures, meter and rhythm, character, tempo, and dynamics of the setting? What are the melodic style and features (such as motives and phrase structure) of the vocal part? Do any of these musical traits seem to reflect any elements from the text? If there are different characters in the text, are they depicted musically in any particular way?
- 3. The tonal and formal plan. What is the formal design of the song? What is its long-range tonal plan? Do both the formal design and the tonal plan correspond in any way with the poem's structure and form?
- 4. The harmonic detail. Are there any modulations, fragments, or particular progressions we want to examine in detail because they seem to be especially interesting or because they seem to depict or reflect some specific elements of the text?¹

We will first apply this methodology to a well-known song by Schubert, Erlkönig.

ANALYSIS 1: SCHUBERT, ERLKÖNIG

Listen carefully to this song, following the score (anthology, no. 38) and the translation of the text. *Erlkönig*, probably one of the most moving songs in the whole Romantic song literature, was written by Schubert on a text by Goethe in 1815, when he was only 18.

1. The text and the story. First, determine how many stanzas the poem has, how many characters are involved in it, and whether it has any recurring material (a refrain?).

¹ For an extensive introduction to all relevant aspects of *Lied* analysis, see Deborah Stein and Robert Spillman, *Poetry in Song: Performance and Analysis of Lieder* (New York: Oxford University Press, 1996).

Does the poem have a form determined by its dramatic content and its characters? How do you think this is a characteristically Romantic text?

The poem has eight stanzas, of which the first and the last are spoken by a narrator (N). Three more characters are involved in the story: the father (F), the son (S), and the Erlking (E) (in German folklore, a spirit who does mischief and evil, especially to children). Stanzas 2, 4, and 6 are dialogues between the son and the father, alternating with stanzas 3 and 5, where the Erlking speaks, and stanza 7, where both the Erlking and the son speak. The text is thus dramatic and narrative, including fast dialogue and a total of four characters.

This is the story of a father and child riding a horse late on a cold night. The evil Erlking constantly tries to seduce the poor, scared boy with charms and promises. In a three-way dialogue, the boy responds to the Erlking's approaches by desperate calls of fear to his father, who tries to reassure the son as well as he can, despite his own mounting tension. Song, dialogue, and tension keep spiraling until the riders reach home and the galloping rhythm stops. And then comes the chilling, final line: "In seinen Armen das Kind war todt" ("In his arms the child lay dead"). Characteristically Romantic features in this poem are its expression of powerful emotions (tension, fear), the proximity and presence of death, and the presence of a mysterious character from the psychic underworld (the Erlking).

2. The musical setting. The challenge of setting such a poem to music comes from having to characterize four different dramatic persons. Listen to the song again, and now focus on how Schubert deals with the challenge: How does the single singer differentiate between characters? How does Schubert achieve unity in a song with so much dialogue between so many characters? What is the general character (mood) of the song, and what musical elements contribute to it?

The action of the song takes place on a galloping horse. The first element that unifies the song is, of course, the galloping triplets in the piano, including the "galloping motive," in the piano's left hand, mm. 1–2. The song projects a mood of tension, which increases with the fear of the child. The ostinato triplet rhythm contributes to the increasing tension, and so does the quickening of the dialogue and the faster tempo, both toward the end. Most of all, tension and dramatic progression are determined by harmonic and tonal progression, as we will discuss below.

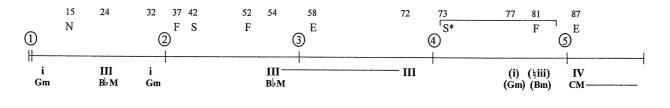
Register and harmony are the essential elements in the characterization of the four persons. The father, trying to be reassuring, sings in a low, deep register, but the chromaticism in his melodies suggests his underlying tension. The son, more and more scared, sings his chromatic melodies in a high register, becoming progressively higher. The sections of dialogue between father and son are tonally unstable, modulating sections. The Erlking tries to be charming and seducing (except toward the end, when he becomes threatening), and although he also sings in a high register, his melodies are diatonic, and his speeches are in the major mode, nonmodulating, and perfectly stable and closed tonally. Is the accompaniment for father and son different texturally than the accompaniment for the Erlking? Notice also the grouping of the persons in each of the stanzas. Stanzas 1, 4, and 6 are shared by father and son, while the Erlking sings his solo stanzas 3 and 5. By stanza 7, however, we have the Erlking and the son grouped together in the same

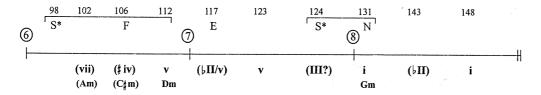
stanza, representing the final victory of the Erlking in his attempt to take the child away from the father.

3. The tonal and formal plan. Examine the score again, and now identify the key areas in the complete song. Make a simple graph showing how these key areas correspond with the eight stanzas/musical sections. After you do this, study the tonal and formal graphs in examples 30.1 and 30.2, comparing them with both the score and your own graph.

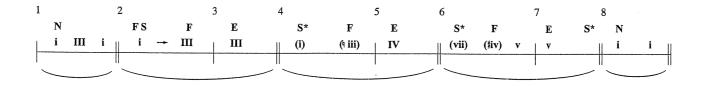
The diagram in example 30.1 shows sections and their correspondence with text stanzas (in circled numbers), underlying tonal motion in the form of tonal areas and some other important tonal events, and speaking characters for each of the sections/stanzas (N, F, S, and E, above the staff). Example 30.2 presents a further reduction of the formal/tonal scheme, including stanzas, characters, and tonal motion. The grouping of the stanzas as represented in example 30.2 shows the initial and final sections spoken by the narrator and three large formal areas that group two stanzas each (2–3, 4–5, and 6–7). In each of these groups, the first stanza is a F–S dialogue, and the second stanza is an E monologue, except for stanza 7, which

Example 30.1





⇒ Example 30.2

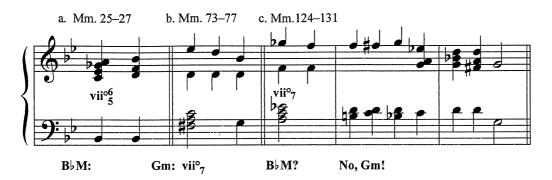


toward the end incorporates the last phrase by S. The three asterisked phrases by S (S*) are the recurring call of the child, "Mein Vater, mein Vater!" which functions as a refrain of sorts.

Several things become immediately apparent through these graphs:

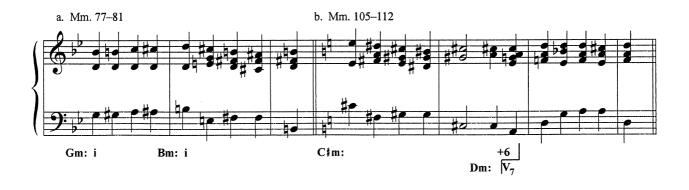
- a) Sections 1 and 8 frame the song, not only narratively, but also tonally. They are harmonically closed, in the tonic Gm, and section 1 prefigures the first large-scale tonal motion (to III, in sections 2–3) with a i–III–i motion.
- b) E's monologues (3, 5, 7) are tonally closed and in major keys, except for the last one in the minor dominant key (the keys are III, IV, and v).
- c) The F-S sections are modulating, and unstable tonally. In sections 4 and 6 key areas are touched on (the keys in parentheses on the graph), but only as stepping stones toward the following, stable sections. Sections 2, 4, and 6 are thus transitional.
- d) The music rises by steps (see E monologues, in III, IV, and v), and we hear that especially in the son's calls of distress to his father (sections S*), which are one step higher each time, rising along with the tension.
- e) The overall tonal plan, then, is i–III–IV–v–i. We can notice here two harmonic elaborations of this general tonal plan: the neighbor bII area in Dm, which ornaments v in mm. 117–119, and the implied III area in mm. 124–127. Taking these two secondary areas into consideration, we could think of the tonal plan as i–III–IV–v–(bII/v)–v–(III)–i. We will comment more on this tonal design below.
- 4. Harmonic detail. Two aspects of this song deserve more detailed attention: first, the use of vii°₇ sonorities on pedals, and second, sections 4, 6, and the end of 7, all of which begin with the S* refrain (that is, the unstable sections, marked with brackets in example 30.1).
 - a) Schubert uses the beautiful, but tense, sonority of a vii°, chord against a pedal in association with the son. First, in m. 25–27, vii°, of Bb against the Bb pedal accompanies the first mention of the child (see the reduction of these harmonies in example 30.3a). The next two appearances of this sonority take place during the child's first phrase, stressing the fear and tension of his words (mm. 42 and 47, against C and F pedals).
 - b) All three beginnings of the S* sections also feature the same sonority. First, in mm. 73–76, the same chord which, in mm. 25–27 was functioning as vii°, of Bb (A–C–Eb–Gb) now appears as F#–A–C–Eb, vii°, of G, over a D pedal, and now leading to Gm (example 30.3b). In mm. 98–101, vii°, of A over an E pedal takes us to Am. Following the sequence up by steps of the "Mein Vater" cry (Gm–Am–BbM), the next S* section begins in m. 124 with vii°, of Bb, spelled as if going to Bb. This is, again, the same chord which in mm. 25–27 took us to Bb, and in mm. 73–76 took us to Gm. The ambiguity is renewed here, where instead of the expected Bb, the chord takes us back to the home key, Gm (and hence Bb is only implied). A chordal reduction of these measures is shown in example 30.3c.

Example 30.3



- c) Now go back to the beginning of section 4, m. 73, and let us study the modulating process in the S* phrase. After the vii°, takes us to Gm, the music moves on immediately to Bm. How is this modulation realized? Gm to Bm is a chromatic third-related motion (i to #iii). There are two modulating techniques at work in these measures. One is the chromatic bass from G to B. The other one is the one you would expect in a chromatic third modulation. What is it? This modulation is shown in a reduced form in example 30.4a.
- d) We do not stay in Bm for long, either (this is the unstable, modulating section). Instead, the music moves to CM by way of G. Bm to CM is a modulation from i to III, the Neapolitan key. What is the role of G in both keys? You can see this even better in the next S* section, stanza 6, where the whole process is a step up from stanza 4. The vii°, took us to Am, and we move, by chromatic bass and common tone, to #iii, C#m. In m. 106 we reach i in C#m, and we move immediately to the minor Neapolitan key, Dm. How? What is the function of the modulating chord, the AM, chord in m. 108, in both keys? A chordal reduction of this modulation appears in example 30.4b.

Example 30.4



PRACTICAL APPLICATION AND DISCUSSION

Our study of *Erlkönig* serves as an introduction to the analysis of song. We have taken into account the text, its divisions and meaning, and its characters. We have seen how the music reflects the sections, meaning, and mood of the text. We have demonstrated that tonal motion, modulations, tonal stability and instability, rhythmic figuration, texture, and register, all serve the dramatic and textual purpose of the poem. After listening again to the song, discuss in class how the analysis and in-depth knowledge of the structure of the song can help you listen to it or perform it. Would you rather perform the song without having any of these insights on how it works and why? How could the insights affect and improve your performance?

For instance, how could you make sure that your performance contributed to the enhanced tension provided by the tonal plan as it rises by steps toward a higher register? How can you emphasize the sense of distress and instability in the S* sections? Stanza 8 features two important dramatic characteristics. First, the return of the narrator, instead of the expected response of the father to the last cry of his son, is a signal to the listener to expect the worst. Finally, when the riders reach home we learn the tragic outcome of the story, punctuated by the HI harmony and the closing recitative passage. What would you do to enhance the drama and horror of this section?

e) Finally, let us examine further the role of the Neapolitan in the song. Besides the modulations to Neapolitan areas we just discussed, a li relationship appears prominently, as a brief key area, in mm. 117–119. This is the phrase where the Erlking goes from charm to threat: "Listen, I love you, but if you don't want to come, I'll take you by force!" We are in Dm, and we go directly to Elm. We hear, again, the vii°, on a pedal, this time vii°,/li in Dm (m. 118). The final, and most dramatic Neapolitan area, however, comes at m. 140, when the father reaches "home with effort and toil," only to find that his child is dead in his arms. Here again we hear, one last time, not only li, but also the vii°,/li on the log pedal.

As a conclusion of our analysis, examine example 30.5a. This example shows a reduction of the complete tonal structure of the song: beginning in Gm, motion through the areas of $B \not M$, CM, and Dm, the $E \not M$ Neapolitan area as a neighbor note (NN) to D, then the implied $B \not M$ area, and the return to Gm. As we saw above, this design can be summarized as $i-III-IV-v-(\not MI/v)-v-(III)-i$. Now compare this sketch with example 30.5b, the "galloping motive" in the piano's left hand: $\hat{1}-\hat{2}-\hat{3}-\hat{4}-\hat{5}-\hat{6}-\hat{5}-\hat{3}-\hat{1}$. This is an instance

Example 30.5



of replication of a melodic motive at the deeper level of tonal structure. One can only admire Schubert's amazing compositional craft at age 18!²

ANALYSIS 2: SCHUMANN, "WIDMUNG"

This song (anthology, no. 48), on a text by Friedrich Rückert, is from a collection titled *Myrthen*. It was composed in 1840, Schumann's "year of song," in which he composed a total of 127 songs. This was the same year in which he married Clara Wieck (to become Clara Schumann), after winning a court suit against her father to obtain his permission to get married. Fittingly enough, "Widmung," ("Dedication") is a love song. Listen to it following the score and words, and determine whether there is more than one character or mood represented by the text and music.

1. The text and the song's meaning. The poem has three sections: verses 1–6 display a clearly passionate character, verses 7–12 show the more contemplative, mystical aspect of love, and finally verses 13–17 are a return to the initial verses and passionate character. The tripartite form of the poem, of course, provides the structure for a song in ternary form, as the one Schumann wrote.

One could see the text merely as a simple, if passionate, love poem. There is more to it, however. Schumann, who had a very active private world of inner fantasy, saw himself as divided into two personalities, represented by the imaginary characters *Florestan* and *Eusebius*. Florestan was the impetuous, passionate, and revolutionary Schumann. Eusebius, on the other hand, was the contemplative, introspective dreamer. (A third personality would join these two in later years, *Master Raro*, the wise and judicious moderator of the two contradictory personalities of Florestan and Eusebius.)

"Widmung" thus has a self-referential quality: It contains expressions of love coming from both of Schumann's personalities. The A sections (first and third) represent the impetuous Florestan, whereas the calmer B section represents Eusebius. This is a good example of a Romantic "character piece," a piece that expresses one or more emotional or psychological "moods."

2. The musical setting. How are the two characters represented musically? First, examine the melody in both sections. How do the following melodic aspects help define Schumann's personalities: range, register, melodic contour (leaps or steps), and rhythmic values. Then look at the accompaniment. How does it represent the two different characters? Other factors that contribute to psychological depiction in the song are dynamics (how?) and tempo. You will have noticed that, even though there is no quantitative tempo change between sections (the beat remains the same), we perceive section B as being slower. Why?

² This motivic parallelism between the galloping motive and the song's tonal plan was first noted by Charles Burkhart in "Schenker's 'Motivic Parallelisms,'" *Journal of Music Theory* 22 (Fall 1978): 145–76. For a more extensive study of motivic parallelisms in this song, as well as an interesting discussion of textual and poetic images and their correspondence with musical structure, see Deborah Stein, "Schubert's *Erlkönig*: Motivic Parallelism and Motivic Transformation," *19th-Century Music* 13 (Fall 1989): 145–58.

3. The tonal and formal plan. We have already determined that both the text and the song are in ternary form. The key of the A section is AbM. The key of the B section is EM. How are these two keys related? How are the modulations into and out of EM effected?

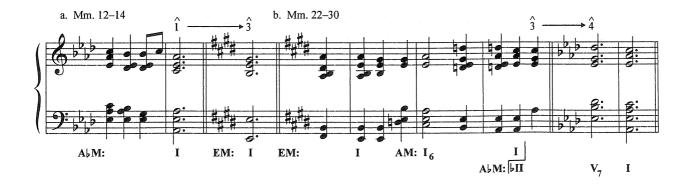
The AlM-EM relationship is an enharmonically spelled VI relationship (as in AlM-FlM). This is, thus, a chromatic third relationship. The modulation in mm. 13–14 is a direct common-tone modulation between tonic chords, using the common Al/G \sharp as a connection (see example 30.6a). The return is a little more complex. In mm. 23–25, the secondary key area of AM (IV in EM) is established. The chord before the change of key signature (m. 25) is IV in EM (the AM triad), with several nonchord tones (NCTs) (identify and label them). From there we move directly to V_7 in AlM, followed by a long pedal on \hat{S} of Al, leading to the return in m. 30.

What made the motion between IV in EM (the AM triad) and V_7 in A_7 so effective? First, function: What is the AM triad in A_7^1 M, and why does V_7 follow so naturally? Second, melodic connection: Is there a common tone between the two chords Schumann uses as a melodic pivot? A reduction of this modulation is shown in example 30.6b.

What is significant about this long-range relationship? Romantic composers definitely preferred third relationships over fifth relationships in their structural plans, and both *Erlkönig* and "Widmung" are examples of this preference. (Examine, as a confirmation, how many adjacent keys are third-related in *Erlkönig*'s tonal plan.) Schumann, in particular, was especially fond of chromatic third relationships, as this song illustrates.

4. Harmonic detail and text painting. The harmony of "Widmung" is not especially venturesome. In the A section, the most notable harmonic event is the occasional presence of the pitch Fb, which not only introduces modal borrowing at the chordal level, but also prefigures the bVI modulation in section B. Does the Fb have any textual significance? It first appears in m. 5 (What borrowed chord results from this Fb?), coloring the word Schmerz ("grief"). Its next appearance is in m. 10 (What is the borrowed chord here?), to the word Grab ("grave"). The association thus seems

⇒ Example 30.6



PRACTICAL APPLICATION AND DISCUSSION

How is this song Romantic? How does the above analysis help you as a listener or performer of the song? Is there anything in particular, in the above discussion, that you would want to project in a performance? How would you do so?

Can you help depict, with your performance, the two different characters represented in the song? If you happen to have this song in your repertoire, you may want to perform it in class in light of this discussion.

to be quite obvious! Notice also another touch of text painting in the A section: What is the highest vocal pitch in the whole song? What textual concept is it associated with? The pitch is G_{\bullet} in mm. 8–9, and the words are "You my heaven, into which I soar"! Now, after soaring into heaven, the next phrase of text is "O you my grave." How does the melody move from heaven to the grave?

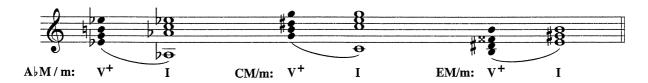
The harmony in the B section is also quite straightforward. What familiar linear chord appears in m. 15? What key area is tonicized in mm. 18–19? What is the NCT in m. 19, beat 1? And in m. 23, beat 1? How is the phrase "Du bist die Ruh" depicted musically? (Think, for instance, of the bass!) How does texture depict the word *Frieden* ("peace")?

Notice now the interesting textual role of secondary key areas in the song. In both the A section (mm. 7–9) and the B section (mm. 18–19), the word *Himmel* ("Heaven"), is represented by secondary key areas: heaven and earth, of course, are not in the same "tonal levels"! The only other secondary key area is, in the B section, the AM key area in mm. 23–25. And here the words are "Your glance has transfigured me." Once the poet is transfigured, he is no more in the same "tonal level" either!

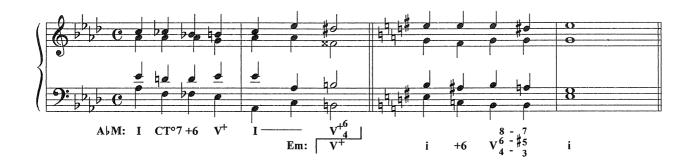
MODULATION BY ENHARMONIC REINTERPRETATION OF V⁺

The augmented triad, like the °7 chord, is a symmetrical chord that divides the octave into equal segments. Whereas the °7 chord divides it into four segments (minor thirds), the augmented triad divides it into three major thirds. Just as there are only three different °7 chords, there are only four different augmented triads. If you begin from C, you will have different augmented triads on C, C‡, D, and D‡. The next triad, on E, contains the same pitches as the triad on C. This means that one sonority, with three different spellings, can function as V⁺ in three different pairs of M/m keys. Example 30.7 demonstrates the three different spellings and resolutions of a single augmented triad, functioning as V⁺ first in A♭M/m, then in CM/m, and finally in EM/m.

♪ Example 30.7



♪♪ Example 30.8



EXERCISE

To practice enharmonic spellings of V^+ chords, refer to exercise 2 in worksheet 30 at the end of this chapter.

This capacity of the augmented triad to function as V⁺ in three different pairs of keys allows us to reinterpret it enharmonically in modulations to distantly related keys. Keys connected by this type of modulation are a M3rd apart. Example 30.8 illustrates one of the possible modulations using the triad from example 30.7. The modulation shown here, from AbM to Em, is between two chromatic third-related keys whose tonics do not share a common tone (that is, one of the chromatic third modulations that cannot be effected by common tone). Play and study this modulation, and understand how it works, before moving on to the following analysis of the Wolf song.



EXERCISE

To practice writing your own modulation by enharmonic reinterpretation of V^+ , refer to exercise 3 in worksheet 30 at the end of this chapter.

ANALYSIS 3: WOLF, "DAS VERLASSENE MÄGDLEIN"

This song ("The Forlorn Maiden," from *Gedichte von Mörike*, anthology, no. 57), one of the best-known *Lieder* by Hugo Wolf, is based on a poem by Mörike, and it again contains many of the characteristic elements of Romantic poetry and song. Read the poem, and think about its structure, its character and moods, and its sections.

1. The text and the story. These are the reflections of a forlorn servant girl as she gets up in the early morning to start the fire and faces the prospect of one more sad and lonesome day. The setup is, thus, purely Romantic. In the first stanza we find out about the time of the day and the immediate circumstances (it is very early, cold,

and she has to get up to light the fire). There is also a moment of certain joy (second stanza), when the fire catches up and for a moment she gets carried away by the beauty of the flames and the sparks. Next, we find that she is in deep sorrow. The third stanza tells us about the reason for her sorrow: She has apparently been abandoned by the boy she loves, and she suddenly remembers that during the night she dreamed of him. The song ends with more tearful expressions of sorrow (fourth stanza).

The moods suggested by the poem are sadness, loneliness, and the sorrowful and painful state of someone who has been forsaken by a lover.

2. The musical setting. How does Wolf depict these moods musically? Try to determine the key of the song by examining its beginning and end. The beginning is very ambiguous: It is all dyads (not triads), and although we feel the presence of A as a tonal center, there is no A triad until m. 13. And then it is a major triad, although we were hearing Am as the implied tonality. The end does not clarify the problem completely: The last measures also feature dyads, this time open fifths on A, avoiding the major/minor definition. Both beginning and end transmit a sense of emptiness and ambiguity (the dyads, the undefined tonal center, the unclear mode of the song). Does this correspond with the young woman's state of mind? Could the missing root in the dyads, or the unclear tonal center and mode, reflect that something is missing from the maiden's life and her resulting feeling of emptiness?

The melodic structure of the beginning also contributes to the sad mood. The melody is grouped into two-measure units, and each unit is made up of a descending fifth, E-A, D-G#, C-F, and B-E. If you take the first pitch of each segment of the sequence, you also come up with a descending line, E-D-C-B. The melody drags our mood downward. Notice then what happens in mm. 13–18: For a brief moment, when the fire catches up, her mood lightens up. The key is clarified for the first time, and now it is in the major mode: AM. Moreover, look at the melody: It is ascending, like the flames, and the rhythms become more lively. Not for long, though. In mm. 19–22 we learn about her sorrow: The key goes down a half step (to AbM), and the melody repeats the half step C-B. Of course, the half step is the traditional musical "sigh," the symbol of sorrow and lament. Here we have it both in the melody and in the keys! The melodic structure of these measures is summarized in example 30.9.

Example 30.9

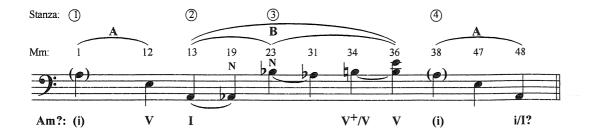


With the remembrance of her dream, the music becomes more agitated and tonally complex, and the melody reaches its highest pitches (mm. 27–34). Then we return to the original mood of sorrow, and to the initial, ambiguous musical materials (mm. 38–end).

The rhythm should also be mentioned as contributing to the character of the song: The obsessive, repeated rhythmic figure reflects the one thought she cannot get out of her mind and the one feeling she cannot ban from her heart.

- 3. The tonal and formal plan. How do you think the form of the song is determined by the poem? We have already seen that there is an initial section which returns, and that these sections correspond with stanzas 1 and 4. These two sections stay within what we could call the "ambiguous Am" key. The two middle sections, stanzas 2 and 3, can be grouped into one section. The main tonal characteristic of this middle section is its modulating character, and the tonal ambiguity provided by the use of the augmented triad, as we will see below. We have already seen that at m. 13 the mode changes to AM, and that the stanza ends with the AbM section (mm. 19–22). In m. 23 we move to BbM, until m. 31 where the "sigh" motive comes back, again in AbM (compare mm. 31–34 with mm. 19–23). A modulating passage (mm. 33–37) takes us back to the return of the initial material in Am. The form can then be summarized as A–B–A. And the two secondary key areas in the B section (AbM and BbM) are chromatic neighbors to the two main keys, the Am/M pair. This formal/tonal plan is summarized graphically in example 30.10.
- 4. Harmonic detail. The most interesting harmonic feature of this song is the use of augmented triads, both to create tonal ambiguity and unrest within phrases and as a means to modulate. Before we look at this aspect of the song, however, notice the two chords in mm. 13–18. The chords alternated in these measures are the AM tonic, and a Mm₇ in third inversion, C#-E#-G#-B, that is, the dominant seventh of F#, V₂/vi in AM. Because it does not resolve to vi, however, this Mm₇ chord does not function as a secondary dominant. In other words, it is not a functional chord. What kind of chord relationship is this, between AM and C#Mm₇? (As a hint, you studied this chord relationship in chapter 27.)

♠ Example 30.10



Let us examine the role of augmented triads in this song.

- a) The augmented triad first appears in m. 20. What is its function here? Think of it as spelled from Eb (Eb-G-Bb) and resolving to AbM: V+ of Ab.
- b) Measures 23–26, the beginning of the B♭M area, is all based on augmented triads: I⁺–V⁺. Notice the connection between A♭M and B♭M (mm. 22–23): From V⁺ in A♭M (E♭–G–B♭) to I⁺₆ in B♭ (D–G♭–B♭, as Wolf spells it), all voices move down by half step. This motion from A♭M to B♭M again stresses the "sigh" motive.
- c) In m. 31, we return to the AbM area, with a I⁺ on Ab. The chord in m. 32 is the same sonority as the V⁺ in m. 20, but now its spelling is not Eb-G-Bb, but B-D#-G. Think of it as B-D#-Fx, and you will recognize V⁺ in E. We realize its new function in mm. 34-36, when it goes first to Em, then to EM, the V of Am which takes us back to Am in m. 38. Look again at mm. 32-33. In AbM, you would read these chords as V⁺-I⁺. In Am, you would read them as V⁺/V-V⁺. This second reading is confirmed in mm. 34-36.
- d) What makes this modulation possible is the enharmonic reinterpretation of the augmented triads. Notice that the reinterpretation of V⁺ in A¹M as V⁺/V of A is the same as what you already studied in examples 30.7 and 30.8. Example 30.11 provides a summary of this modulation, showing how these chords are interpreted in both keys.

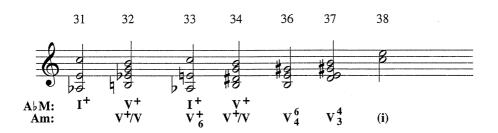
The passage in mm. 23-26, all based on augmented triads, represents an important juncture in the narrative. In the previous section the girl had been in an early morning dreamlike state, and suddenly reality dawns on her, with the remembrance, in the phrase beginning in m. 27, of her unfortunate state. Augmented triads are introduced precisely in the passage that takes us from the dreamy moments by the fire to the remembrance of reality and the anxiety that comes with it.

EXERCISE

To practice analyzing a Lied, refer to exercise 1 in worksheet 30 at the end of this chapter.



(a) Example 30.11



PRACTICAL APPLICATION AND DISCUSSION

To summarize, discuss in class how tonality, harmony, modulations, melody, rhythm, and texture contribute to the depiction of what our forlorn maiden felt that early morning when she got up to light the fire. Discuss also how this discussion of the song affects your hearing of it (listen to it again after finishing its analysis), and how it would affect your performance if you were to perform it.

From a more general point of view, what are your impressions of the expressive power of musical elements as

displayed in these German *Lieder*? We are all aware that music in itself is expressive. In these songs, however, we can see in detail why it is expressive, what makes it so, and we see that it is not expressive by chance: Romantic composers knew very well how to use musical elements such as melody, harmony, rhythm, to express very specific feelings and moods or to depict situations. In these songs, composers achieved the artistic and expressive unity of poetry and music. These songs are truly "musical poems."

FOR FURTHER STUDY

For additional chapter 30 materials, refer to the Harmony in Context Web page at www.mhhe.com/roigfrancoli2e.

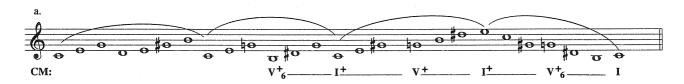
ASSIGNMENT AND KEYBOARD EXERCISES

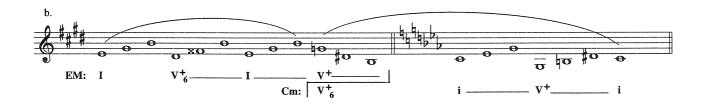
For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 30 in the workbook.

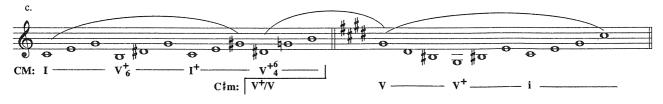
PITCH PATTERNS

Sing the pitch patterns in example 30.12, and as you sing, listen to the modulation by enharmonic reinterpretation of an augmented triad.

Example 30.12



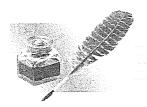




Terms for Review

Lied (Lieder)
Text painting
Formal types:
 strophic form, ternary, binary, through-composed

Schubert: Erlkönig
Schumann: "Widmung"
Modulation by enharmonic
reinterpretation of V⁺
Wolf: "Das verlassene Mägdlein"



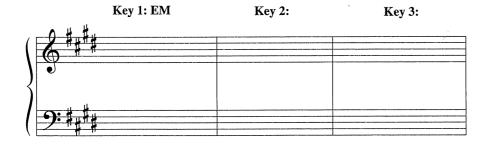
Worksheet 30

EXERCISE 1 Analysis. Analyze anthology, no. 49, Schumann, "Am leuchtenden m

Sommermorgen," from <i>Dichterliebe</i> , op. 48. Answer the following questions with as nuch detail as possible.	
1.	Does the poem establish two contrasting moods? What moods?
2.	What is the initial chord? Explain its spelling. What is unusual about this beginning?
3.	Both in m. 1 and m. 6 this chord functions as in the key of, and as such it resolves to
4.	How is the second chord in m. 8 related to the above chord? How does it function here, and in what key?
5.	Focus now on mm. 8–13. The first chord in m. 9 is a linear chord leading to the second chord. Explain how the first chord works linearly, and what the function of the second chord is. What key area is suggested in mm. 8–9? How is this key area related (by RN) to the original key?
6.	Thinking of the key area suggested in mm. 8–9, how does the second chord in m. 9 resolve? What is the exact RN and function of the first chord in m. 10 with respect to the key area of m. 9?
7.	On the other hand, the first chord in m. 10 is also part of a harmonic pattern that follows (mm. 10–11), and which leads back to the original key. Explain clearly, and using all the correct harmonic terms, how mm. 8–13 function harmonically, and what pivot chords are used between key areas.

- 8. Now look at the text for these measures (mm. 8–12). Does the tonal ambiguity reflect the mood of the text? Could we also say, now, that the opening chord itself also reflects and announces the ambiguous moods of the text?
- 9. Who is speaking beginning in m. 17? What is the secondary key area in mm. 17–19? How is the secondary tonic in m. 17 related to the main key? What words of the text does this relationship emphasize?
- 10. Explain the linear chord in m. 16, beat 2. Can you also explain this chord functionally with respect to the key of m. 17? What kind of an altered chord is it from a functional point of view?
- 11. Write a concluding paragraph explaining how this song reflects the content of the poem it is based on.

EXERCISE 2 Write V⁺, and resolve it to I, in EM. This chord may be used to modulate to two other major keys by respelling it enharmonically. Indicate the keys, and provide the spelling (leaving the chord in the same position) and the correct resolution to the tonic in each of the new keys.



EXERCISE 3 Write a modulation in four voices by enharmonic reinterpretation of V^+ , from $C^{\sharp}m$ to a key of your choice.

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Chapter 31

Toward (and Beyond) the Limits of Functional Tonality

In the last chapter of this book we will study a variety of harmonic techniques and musical processes used by composers in the latter part of the nineteenth century and the beginning of the twentieth century. Some of the procedures we will see have the effect of weakening functional tonality; others suspend tonality, create a sense of tonal ambiguity, or provide the means to organize triadic sonorities in alternative ways to functional tonality. The weakening and eventual dissolution of tonality in the late Romantic harmonic language which we will study in the present chapter is one of the determinant factors that eventually led to the search, on the part of composers in the early twentieth century, for alternative systems to organize their pitch structures.

TONAL AMBIGUITY AND IMPLIED TONALITY

In our study of Chopin's Prelude no. 4 in chapter 29, we introduced the concept of implied tonality. Because tonal ambiguity and implied tonality are harmonic concepts essential to our understanding of much music from the late-Romantic period, we will devote some time to them now, focusing on a piece that demonstrates these ideas extensively: the Prelude to Wagner's *Tristan und Isolde*. The opera, one of Wagner's great masterpieces, is based on a medieval story of Celtic origin, which at the same time contains all the ingredients for a fervently Romantic drama. Tristan, a knight, has been sent to fetch the bride who has been chosen for his king in a mostly political arrangement. The mother of the bride prepares a love potion to help her win the love of the king but, by a fateful mistake, Tristan and Isolde end up drinking the love potion themselves. The rest of the story is best summarized by Wagner himself in his program notes to the performance of the Prelude, in the following sentences, which amount to a Romantic manifesto on life, love, and death:

Fired by [the love potion's] draught, their love leaps suddenly to vivid flame, and they have to acknowledge that they belong only to each other. Henceforth no end to the yearning, longing, rapture, and misery of love: world, power, fame, honor, chivalry, loyalty,

and friendship scattered like an insubstantial dream; one thing alone left living: longing, longing unquenchable, desire forever renewing itself, craving and languishing; one sole redemption: death, surcease of being, the sleep that knows no waking!

The *Tristan* Prelude

Example 31.1 is an annotated piano reduction of mm. 1–46 of the *Tristan* prelude, slightly less than half its complete length. This limited fragment will suffice to illustrate the characteristics of Wagner's harmonic and formal style in his later works (best represented by *Tristan und Isolde* and *Parsifal*). Listen to the example, or if possible to the whole prelude, and play through it if you have sufficient keyboard skills. How do you think this music grows formally? What are the fundamental compositional blocks and elements? Is it periodic? Are there clear cadences? How is tonality defined? What "key" is the prelude in? How are keys defined? Are chords clearly identifiable? If not, why not? What is the dramatic and expressive result of all these musical traits? After you have tried to answer at least some of these questions, read the following comments.

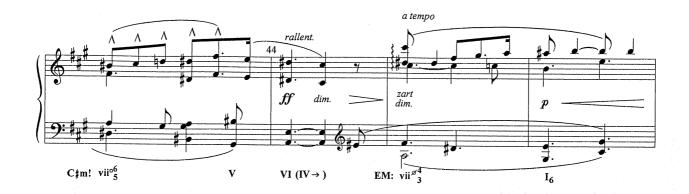
- 1. You will have heard that this music moves in a *continuous flow*. It is *nonperiodic*, and phrases are open-ended. Cadences are systematically avoided or resolved deceptively, so that clear arrivals on any kind of tonic chord or tonicized degree are avoided.
- 2. The music is highly motivic. The prelude contains a number of characteristic motives which will become prominent throughout the opera. These are called Leitmotifs, musical ideas that are associated with a particular person, idea, or situation in the drama. Several of these motives are labeled in our example according to generally accepted designations.
- 3. Formal growth results from the *spinning out of motives*. This music is based on *continuous development* and on an unending flow of melody. *Sequences* are often used as a developmental technique.
- 4. *Tonality is obscured* by the avoidance of cadences and of arrivals on a tonic. Moreover, there is not a single clear tonal center (*tonal ambiguity*), and tonal centers are not clearly defined. Key areas are more often defined by unresolved dominants than by arrivals on a tonic (*implied tonality*). The resulting effect is of *constant tonal fluctuation*.
- 5. Chords and harmony are further obscured by the extensive use of *chromatic non-chord tones* (NCTs) (especially suspensions, appoggiaturas, and passing tones).
- 6. Each of the above elements contributes to the dramatic purpose of this music. Wagner achieves an unparalleled constant buildup of tension, unresolved and continuous tension, which provides a suitable musical setting for the "longing, longing unquenchable, desire forever renewing itself, craving and languishing." The tension does not really find resolution until the very end of the opera, when Tristan and Isolde find the fulfillment of their tragic love only in death, and the music finally reaches a resting point on a long BM tonic chord.

R. Wagner, Prelude to Tristan und Isolde, mm. 1-46



Continued



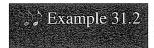


We will now study some of these particular musical characteristics as they appear in our excerpt.¹

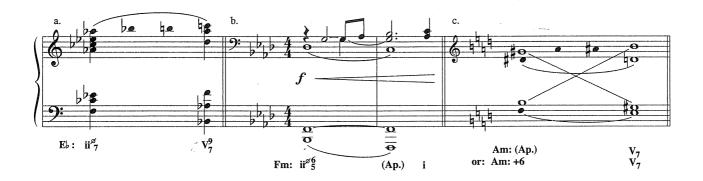
The opening unit (mm. 1–17). The "Tristan chord." The principles of tonal ambiguity and implied tonality are present from the very outset of the prelude. The initial idea (mm. 1–3) includes two motivic units: the "love" motive (mm. 1–2), with its descending chromatic gesture, and the desire motive (mm. 2–3), chromatically ascending. The key signature indicates Am or CM. This opening gesture ends on a chord that appears to be V_7 of A, so we'll think of this opening as being in Am. The prelude opens with one of the most mysterious, and certainly one of the most famous, chords in tonal literature, widely known as the **Tristan chord.** The sonority sounds like a half-diminished seventh chord on F (in ascending thirds, F–A \triangleright –C \triangleright –E \triangleright , spelled as F–G \sharp –D \sharp). In itself, this is an extremely ambiguous chord which, as is very often the case with late-Romantic harmony, allows for several possible interpretations. Let us see some of these possible interpretations:

1. Because in Am this chord seems to be totally nonfunctional, some authors have interpreted the G# as being an appoggiatura, and then the A in m. 2 becomes the real chord tone. This has allowed for two interpretations: as B-D#-F\-A, it is an altered form of V₇/V in Am (with a lowered fifth). As F-A-B-D# it is the Fr +6 chord in Am. A possible criticism to either interpretation is that the G# takes most of the measure and is five times as long as the brief A. Shouldn't one perhaps think of the G# as the "real tone," and the A as a passing tone?

¹ An interesting collection of historical and analytical studies on the prelude, along with the orchestral score, can be found in the Norton Critical Score, Richard Wagner, *Prelude and Transfiguration from Tristan and Isolde*, ed. Robert Bailey (New York: Norton, 1985). Especially interesting from an analytical point of view are the contributions to the collection by Robert Bailey ("An Analytical Study of the Sketches and Drafts," pp. 113–46), and William Mitchell ("The *Tristan* Prelude: Techniques and Structure," pp. 242–67). Some of the ideas in the following discussion of the Prelude are borrowed from these two sources. Piano reductions of the complete Prelude can be found in the music anthologies by Charles Burkhart (*Anthology for Musical Analysis*, Fort Worth: Harcourt Brace, 1994) and Mary Wennerstrom (*Anthology of Musical Structure and Style*, Englewood Cliffs, NJ: Prentice Hall, 1982).



Wagner, *Tristan*, Prelude, m. 82; Prelude to act III, mm. 1–2; and the "Tristan chord" (Prelude, mm. 2–3)



- 2. The chord appears numerous times later in the opera, in a variety of other tonal contexts which stress the ambiguous quality of this sonority, but which also show its use by Wagner as a more functional °7 chord. Examples 31.2a and b, for instance, show appearances of this same sonority as ii°, in E and (transposed up a step and inverted) as ii°, in Fm.
- 3. If we consider, then, the G# in the first chord of the prelude as the "real" chord tone, a linear interpretation of this chord, as presented in example 31.2c, seems to be plausible. The chord has two common tones with V₇, the B and the G#, which undergo a voice exchange, whereas the other two tones are appogiaturas that move by chromatic voice leading to tones in V₇. According to this interpretation, we can think of the Tristan chord as an appoggiatura chord of the same type we studied in chapter 30.
- 4. Considering the G# as the chord tone, however, also allows for yet another interpretation that is not contradictory with the one we have just discussed. If you organize the sonority F−B−D#−G# as F−G#−B−D#, you can verify that it is actually a type of +6 chord, framed by the +6 interval F−D#. Although the standard "nationalities" for +6 chords are indeed the most commonly found types, we should not just dismiss the possibility of other intervallic arrangements for the two inner pitches that fill in the +6 framework in an +6 chord. The Tristan chord, from this perspective, is then an +6 chord in Am that resolves, as expected, to V₇, as shown in the alternative interpretation under example 31.2c.²

² The linear interpretation of the Tristan chord was proposed by Mitchell in the article cited in footnote 1. The interpretation as an F-G#-B-D# +6 chord, on the other hand, is proposed by Daniel Harrison in his article "Supplement to the Theory of Augmented-Sixth Chords," cited in chapter 27. Harrison calls this type of +6 chord the "dual German-sixth chord."

The double-tonic complex. In mm. 5–7 a second statement of the initial idea leads to a Mm_7 chord on G, V_7 of CM. And yet a third statement leads to V_7 of EM (or V_7/V in Am). Within the first twelve measures of the piece, Wagner has already established the tonal conflict that will prevail for the rest of the prelude. The music fluctuates between Am and CM (along with some other key areas), and EM is stressed throughout, both as a chord and as a key area, as the dominant of A. The prelude concludes on a dominant of C, leading to the beginning of act I in Cm. Moreover, modal definition is far from clear in *Tristan*, and thus both Am/AM and CM/Cm are present in the music. This fluctuating aspect of the prelude's tonal center (between Am/M and CM/m) is well expressed by the term **double-tonic complex**.

The opening unit concludes with a deceptive resolution of V_7 in Am (to the F chord in m. 17). Notice that this resolution completes the full-octave chromatic ascent that started in m. 2 in the top voice (from G # to the G #-A, an octave above it).

The second unit (mm. 18–24). The theme that begins in m. 17, beat 2, is known as the "glance" motive. The FM chord in m. 17, which functioned as a deceptive resolution of V_7 in Am, is immediately reinterpreted as IV in CM, and in mm. 18–20 we are back in the CM key area. Not for long, though: In mm. 21–22 Dm is implied (What is the chord in m. 21, beat 2, in Dm?), and in m. 24 we hear again V of EM (that is, V/V in Am). If we think of this section in Am throughout, the key areas are then III–iv–V (or CM–Dm–EM), all in fast succession. In m. 24 we reach some kind of a cadence on A (bass E–A), embellished by an appoggiatura chord. Could it be our first arrival on A as a tonic? As a matter of fact, it is the clearest arrival on A in the whole prelude, only it is AM, not Am; and as the music continues into mm. 25–26, clearly in EM, we hear the AM chord, retrospectively, as IV in E!

The third unit (mm. 25–36). In mm. 25–29 we hear the "love potion" motive, in a sequential passage in which EM is again implied. The bass motive in mm. 28–29 is known as the "death" motive (B–C–D#). In the measures that follow, several key areas are implied in fast succession: CM in mm. 32–33 (the glance motive again), and then FM and Dm (both briefly tonicized in mm. 35–36).

The fourth unit (mm. 36-44). Notice the harmonization of the theme that begins in m. 36, beat 2 (the "magic casket" motive). We hear the two chords (on D_{P} and C) as $+6-V_{7}$ in FM, then repeated an octave higher. What comes after is a sequence on this same motive, up by steps: we hear $+6-V_{7}$ in GM, and then what would have been another sequence segment in A (mm. 40-41) turns into a return of the glance motive and of the EM key area. You will have observed that in all these "key areas" (F, G, E) we have not encountered a tonic chord. All three have been "established" (or implied) by their respective dominants.

Look at the second chord in m. 42 (F# in the bass). It sounds like $vii_5^{\circ 6}$ of E, that is, $vii_5^{\circ 6}/V$ in A. And the new key signature, three sharps, seems indeed to announce AM. Now listen to m. 43. The first chord is the same sonority we just heard as $vii_5^{\circ 6}/V$ in A, now reinterpreted as $vii_5^{\circ 6}$ in C#m! And by the time we get to the AM chord in m. 44, it comes as a deceptive resolution of V_7 in C#m, that is, as VI in C#. Or does it? Our excerpt really ends in m. 44, but we have included two more measures to show that actually the music goes on to EM, so we can also hear the AM in m. 44 as IV in EM! In other words,

in spite of the "AM" key signature, we hear our AM chord in m. 45 in either C‡m or EM, but certainly not in AM!

So why this long discussion of a fragment from the *Tristan* prelude? Because it illustrates, perhaps better than any other work of the period, a stage in the history of tonality. In this stage, tonal ambiguity and instability become the norm, rather than tonal definition and stability. The music is in a state of constant tonal fluctuation, key areas are implied rather than established, chords often allow for several possible interpretations, and key areas are defined more by dominant than by tonic chords. Formally, the music is highly motivic, and melodic, motivic cells become the essential building blocks.

Tristan und Isolde has often been seen as a turning point in music history. Because of the enormous impact it had on composers, it represents an important step in the process toward the breakup of tonality. Composers who were directly influenced by Wagner's harmonic and melodic idioms in this opera include, among many others, Anton Bruckner, Max Reger, Hugo Wolf, Gustav Mahler, Richard Strauss, and Arnold Schoenberg in Germany and Austria, and César Franck, Gabriel Fauré, and Claude Debussy in France.



EXERCISE

To practice analysis of musical fragments featuring tonal ambiguity, implied tonality, or the double-tonic complex, refer to exercises 1.1 and 1.2 in worksheet 31 at the end of this chapter.

EQUAL DIVISIONS OF THE OCTAVE

The diatonic scale divides the octave unequally into some combination of tones and semitones. Functional harmonic root motions are based on unequal divisions of the octave that result from the diatonic scale, such as major and minor thirds and perfect fifths and fourths. There are, however, five possible divisions of the octave into equal segments. Each of these divisions requires the use of tones foreign to the diatonic scale. These *symmetrical divisions* are as follows:

- 1. The **chromatic scale** divides the octave into twelve semitones. There is only one chromatic scale.
- 2. The **whole-tone scale** divides the octave into six whole tones (example 31.3a). There are only two possible whole-tone scales using different pitches.
- 3. A **cycle of minor thirds** (the fully diminished seventh chord) divides the octave into four minor-third segments (example 31.3b). There are only three possible different °7 chords.
- 4. A **cycle of major thirds** (the augmented triad) divides the octave into three major-third segments (example 31.3c). There are only four possible different augmented triad chords.
- 5. The **tritone** divides the octave into two tritone segments (example 31.3d). There are six possible different tritones.

(a) Example 31.3

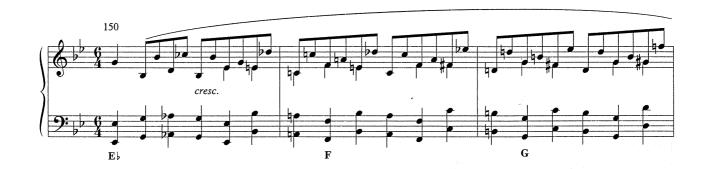


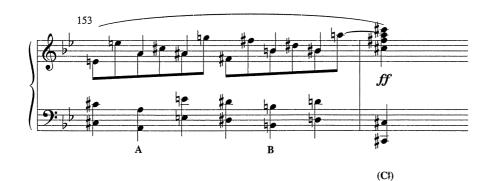
Because all of these equal divisions of the octave produce nondiatonic pitch relationships, using them as roots on which chords are built or as key areas will produce chromatic, nonfunctional tonal relationships. This feature of equally divided octaves was used by composers in the late-Romantic period (and certainly also in the twentieth century) to expand (or to suspend) functional tonality. The examples we will now study illustrate some of these harmonic relationships.

First, examine example 31.4, which begins in EhM. The passage moves sequentially up by whole steps: FM is tonicized in m. 151, GM in m. 152, and then AM and

Example 31.4

F. Chopin, Ballade no. 1 in Gm, op. 23, mm. 150-154





BM in m. 153, leading to a ⁶₄ chord on C‡ in m. 154. This progression by whole steps has obviously taken us away from E♭M very quickly! Although the music returns to E♭M shortly after this passage, the whole-tone scale allowed Chopin to create a moment of "tonal parenthesis."

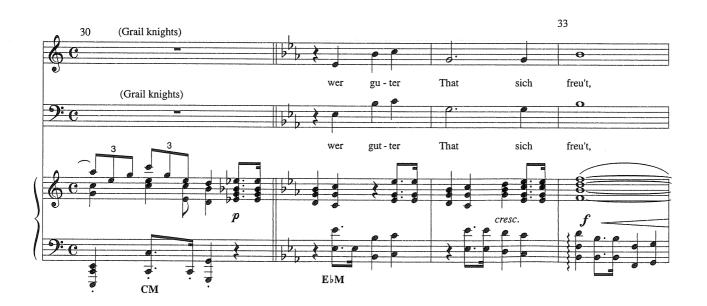
The keys tonicized in the Wagner fragment in example 31.5 also quickly take us away from the initial CM. As the Knights of the Grail assemble for a banquet, this solemn processional music moves through the distant keys of CM, ElM, GlM, and AM. Verify each of these keys on the score. How has the octave been divided by these key areas?

The Brahms phrase in example 31.6, on the other hand, takes us through the key areas of Cm, G#m, Em, back to Cm, and again to G#m, all in the space of five measures. Identify each of the tonicized chords in these key areas. How are they related intervallically? The chords on the downbeats of mm. 24 and 26 are particularly dissonant against the bass, and obviously do not resolve until beat 2. What kind of chords are they?

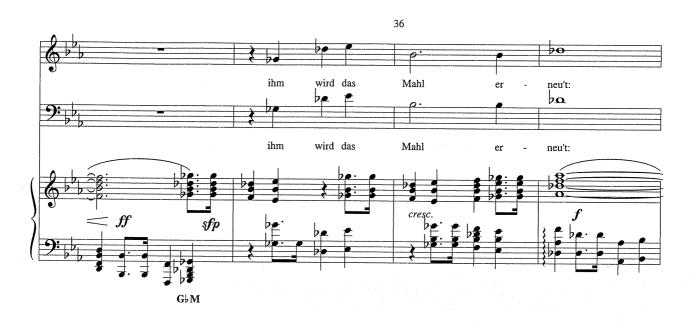
The following example by Maurice Ravel will illustrate the close relationship between two of the symmetrical divisions of the octave: the tritone and the whole-tone scale. The roots of the chord pairs in mm. 45–48 of example 31.7 are related by tritone: F–B, Eb–A. Now look at mm. 49–50, where you will see a bass motion in which ascending tritones alternate with descending major 3rds. Put all the pitches of this bass together as a scale, and you will come up with a whole-tone scale. Notice that this scale contains two symmetrical halves of three notes each, and that the two halves are

Example 31.5

R. Wagner, Parsifal, act I, scene 2, mm. 30-41



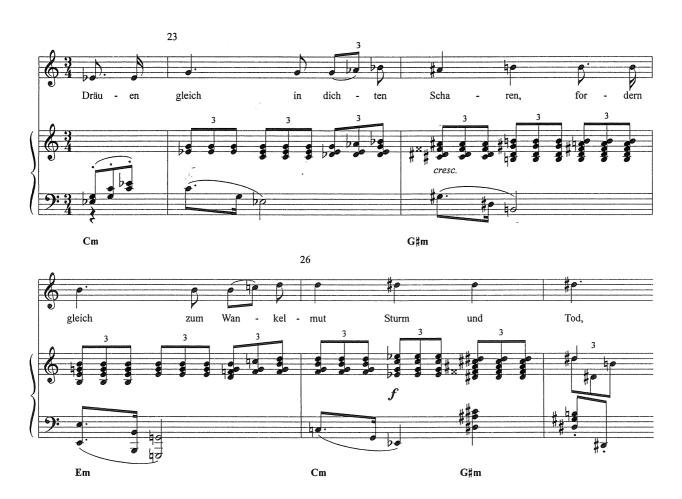
Example 31.5 Continued







J. Brahms, "Treue Liebe dauert lange," from *Romanzen aus Magelone*, op. 33, mm. 23–27



at the distance of a tritone (F-G-A//B-C‡-D‡). Ravel is here taking advantage not only of the symmetrical division of the octave, but also of the symmetrical division of the whole-tone scale!



EXERCISES

To practice writing progressions using equal divisions of the octave, refer to exercise 2 in worksheet 31 at the end of this chapter.

To practice analysis of musical fragments featuring equal divisions of the octave, refer to exercise 1.3 in worksheet 31 at the end of this chapter.

Maurice Ravel, Waltz no. 1, from Valses nobles et sentimentales, mm. 45-51

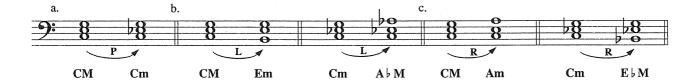


PARSIMONIOUS VOICE LEADING: THE PLR MODEL

Although the music of late nineteenth-century composers such as Liszt, Wagner, Franck, Richard Strauss, and others is triadic, we have already seen that their triadic progressions often do not follow the functional model based on the circle of 5ths and on tonic/pre-dominant/dominant relationships. We have already studied several alternative techniques of chordal organization (sequential and nonsequential linear progressions, symmetrical divisions of the octave, etc.). Now we will study another alternative model that accounts for many of the triadic relationships in the music by composers in the Romantic period, and which we will refer to as the **PLR model**, or also as **parsimonious voice leading**.³

³ This section is a pedagogical adaptation of recent work by David Lewin, Brian Hyer, and Richard Cohn. I am especially indebted to the following articles by Cohn: "Maximally-Smooth Cycles, Hexatonic Systems, and the Analysis of Late-Romantic Triadic Progressions," *Music Analysis* 15 (1996): 9–40, and "Neo-Riemannian Operations, Parsimonious Trichords, and Their *Tonnetz* Representations," *Journal of Music Theory* 41 (1997): 1–66.



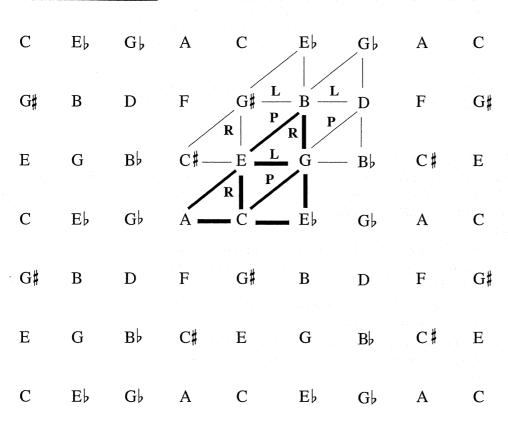


Examine example 31.8. In example 31.8a, the two triads form a parallel major-minor pair, defining a P (parallel) relationship. In example 31.8b, the fifth of one triad is the same pitch as the leading tone for the other triad (for instance, the fifth of the Em triad, B, is the same pitch as the leading tone for the C triad; and the fifth of the Cm triad, G, is the same pitch as the leading tone for the AhM triad), hence the label L (for "leading-tone exchange"). In example 31.8c, the triads form a relative major-minor pair, and they define the R (relative) relationship. In all three cases, note that:

- 1. Each of the pairs includes a major and a minor triad. PLR transformations are always between a M and a m triad.
- 2. In all cases, the voice leading includes two common tones, while a single tone moves by half step (in P and L) or whole step (in R). Hence the term *parsimonious* voice leading (parsimonious means "frugal, stingy").
- 3. In L and R transformations, triad roots are third-related, although root relationships are not the main issue in this type of linear transformation, essentially based on common-tone and stepwise voice leading.
- 4. It is interesting to note that, although these transformations are usually associated with nonfunctional, highly chromatic music, the only chromatic triadic relationship in example 31.8 results from the P transformation (CM and Cm are chromatically related). You can verify that both L and R transformations, on the other hand, are effected between diatonically related triads. In other words, whereas P involves chromatic voice leading, the voice leading in both L and R simply involves a diatonic step.

The *Tonnetz*.

A useful graphic tool to understand these three types of triadic transformations, their interaction, and the type of progressions they can generate, is a two-dimensional matrix of tones, or harmonic network, usually known by the German term *Tonnetz*. Although several types of *Tonnetze* can be designed, each showing different tonal relationships, the type which we will introduce here, the *parsimonious Tonnetz*, is best represented



by a matrix in which tones are related by minor thirds in horizontal lines and by major thirds in vertical lines. Examine the *Tonnetz* in example 31.9, and understand how it works. Begin, for instance, from the center pitch, C, and see the intervallic increments of m3 to its right and left, and of M3 above and below. Now let us see how PLR transformations work within this *Tonnetz*.

- 1. A triad is represented by a triangle of adjacent pitches. Find, for instance, the CM triad, C-E-G.
- 2. Pairs of triads represented by adjacent triangles are related by PLR operations, and hence feature parsimonious voice leading. The three triads that share an edge with the CM triad, for instance, form the collection of triads related to CM by PLR (these triads are indicated by boldface lines in example 31.9).
- 3. In all cases, P-related triads share a hypotenuse; L-related triads share a horizontal edge; and R-related triads share a vertical edge. Identify these relationships on the *Tonnetz*, first from the CM triad, then from other triads.

4. As it is obvious from the *Tonnetz*, it is not possible to have two of the same operations in a row (PP, RR, or LL), unless you want to go back to the same triad you started with (as in CM-Cm-CM). Thus, after P you must have L or R; and after L you must have P or R. Before we go on, try to experiment playing several progressions using the *Tonnetz* as a guide (in other words, try "navigating the *Tonnetz*").

You will have found out that because after each move you can go in two possible directions, the number of possible different progressions is quite limitless. Composers, however, have often favored progressions that feature consistent motions within the *Tonnetz*. And this brings us back to the equal divisions of the octave.

Roots by M3: The PL Progression

Study the progression underlying the passage by Brahms in example 31.10. If we think of it in terms of root progression, we come up with the triads Alm-G#m-EM-Em-CM-Cm-Alm-G#m-EM. Find this progression in the *Tonnetz*. You will observe several things:

- 1. Roots in the Brahms progression move by major 3rds; hence, they divide the octave symmetrically, and that is why after three pairs of M/m triads, we are back to the original pair.
- 2. The *binary operation* (a pair of operations) that produces this equal division by M3 is PL (or its retrograde, LP).
- 3. The PL binary operation is represented in the *Tonnetz* by a vertical line of transformations. Example 31.11a shows a reduction of the Brahms progression, in which the single pitch that moves from one chord to the next is represented with a black notehead. Example 31.11b shows the vertical path for this binary cycle as abstracted from the *Tonnetz*.

Roots by m3: The PR Progression

Refer to anthology, no. 51 (Liszt, *Consolation*, no. 4), mm. 18–26. Play through the passage and identify the key areas that are tonicized. You will see that beginning in m. 18, beat 3, we are in DbM, followed by Dbm in m. 21, EM and Em in m. 22, Gm in 23, and back in DbM in m. 26. Find the beginning of this progression, DbM–Dbm–EM–Em–Gm in the *Tonnetz*. You will see that:

- 1. Roots in this progression move by minor thirds, producing another equal division of the octave.
- 2. The *binary operation* that produces this equal division by m3 is PR (or its retrograde, RP).
- 3. The PR binary operation is represented in the *Tonnetz* by a horizontal line of transformations.
- 4. Liszt skips one step in the parsimonious progression by moving directly from Em to Gm, instead of Em-GM-Gm. Then he leaps a tritone by going directly from Gm back to D♭M. He nevertheless stays within the same horizontal path of transformations. How many steps in the process does he skip to leap from Gm to D♭M?

J. Brahms, Concerto for Violin and Cello, I, mm. 270-278

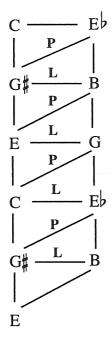


5. Example 31.12a is a chordal reduction of Liszt's progression (where the tonicized key areas are shown as half notes), followed in example 31.12b by a PLR reduction of the complete parsimonious progression on which it is based (with the steps skipped by Liszt indicated in parenthesis). Example 31.12c shows the horizontal path for this binary cycle as abstracted from the *Tonnetz*.

Example 31.11a



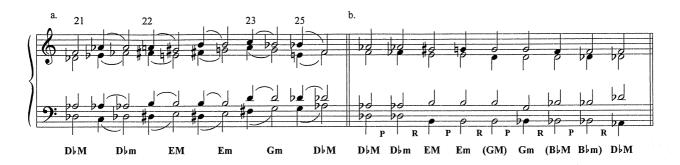
🔊 Example 31.11b

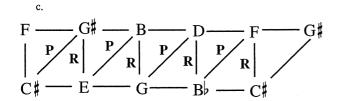


Roots Alternating M3 and m3: The LR Progression

We will now look at what is perhaps one of the most spectacular examples of parsimonious voice leading in the whole music literature: Beethoven's 9th Symphony, II, mm. 143–167, reproduced in piano reduction in example 31.13. Beginning in CM, the passage travels through the following triads: CM-Am-FM-Dm-B\M-Gm-E\M-Cm-A\M-Fm-D\M-B\m-G\M-E\m-BM-G\m-E\m-BM-G\m-E\m-AM. That is, nineteen different







triads in fast succession. Considering that there is a combined total of twenty-four major and minor triads, Beethoven gets close to (but falls short of) going through all of them! Of course, we would need to extend our *Tonnetz* from example 31.9 in order to see it represented in its totality. You can easily find, however, at least fragments of this progression in the *Tonnetz*, and you can verify the following observations:

- 1. Roots in this progression move by alternating major and minor thirds. This is not, then, a case of equal division of the octave.
- 2. The *binary operation* that produces the alternating M3s and m3s is LR (or its retrograde, RL).
- 3. The LR binary operation is represented in the *Tonnetz* by a diagonal line of transformations.
- 4. Example 31.14a is a reduction of a portion of Beethoven's LR progression, and example 31.14b shows the diagonal path for this binary cycle as abstracted from the *Tonnetz*.

EXERCISES

To practice writing parsimonious progressions, refer to exercises 3 and 4 in work-sheet 30 at the end of this chapter.

To practice analysis of PLR progressions, refer to exercise 1.4 in worksheet 31 at the end of this chapter.



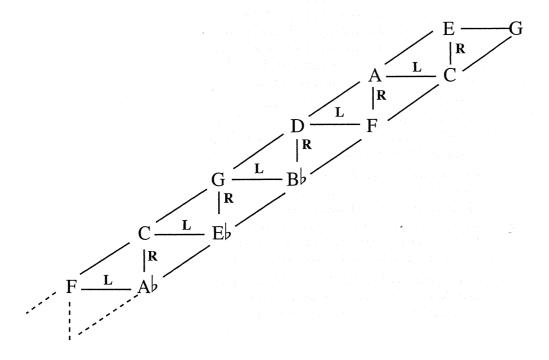
L. v. Beethoven, Symphony no. 9 in Dm, op. 125, II, mm. 142-175



🕽 Example 31.14a



Example 31.14b



BEYOND THE CONFINES OF FUNCTIONAL TONALITY

The types of harmonic processes we studied previously (implied tonality, double-tonic complex, equal division of the octave, parsimonious voice leading, etc.) obviously resulted in a weakening of functional tonality. In some cases, however, similar processes lead not only to the weakening of tonality but, beyond that, to passages or pieces in which tonality is altogether absent. This is illustrated by the Franz Liszt example we will now examine.

An Example by Franz Liszt

The opening section of Liszt's Faust Symphony (example 31.15) is an excellent illustration of avoidance of tonal definition through the use of augmented triads and of longrange equal division of the octave. Some of the salient aspects of pitch organization in this passage can be outlined as follows:⁴

- 1. The lack of tonal definition becomes clear at the very outset of the movement. After the initial fortissimo Ab, mm. 1–2 feature a series of four arpeggiated augmented triads with roots descending by half steps, which not only do not create any sense of functional tonality, but moreover introduce the twelve pitches of the chromatic scale within two measures. The thematic material for the rest of the passage is also based to a great extent on augmented triads. Notice the descending scalar passage in mm. 9–10, based on two overlapping augmented triads (the two descending triads Db-A-F and C-Ab-E).
- 2. Looking at the long-range design for this passage, we see that the bass in mm. 1–2 unfolds a chromatic scale from Ab to E, and that E is again reached in m. 11 after the descending scalar passage in mm. 9–10. After the fermata, the initial thematic material is repeated beginning on E, now unfolding a chromatic motion from E to C. C is also the high point we reach in m. 15, and an octave lower in m. 17. The descending scalar passage in mm. 20–21 now leads to Ab, providing a sense of circularity to the complete section (which, of course, also started on an Ab).
- 3. In summary, we notice that no particular key is defined or established throughout this opening section. The pitches that stand out as points of formal articulation are Al-E-C-Al. Here again, the long-range design of the passage outlines an augmented triad, which divides the tonal space into equal segments.
- 4. Moreover, these same pitches constitute the main tonalities for the complete composition. The first movement is in Cm (with an important section in EM). The second movement is in AbM, with a final passage that oscillates between Ab and E. The third and final movement oscillates between the tonal centers C and E, and includes a final section that begins in AbM and ends in CM. The equal division of the octave is here applied to the tonal design of a complete symphony.
- 5. We should remember that this opening is a musical evocation of the opening of Goethe's *Faust*, a monologue in which Faust expresses his disenchantment with life, philosophy, and religion, his desire to extend the limits of his knowledge, and his willingness to turn to magic to attain his goals. Liszt uses the augmented triad in a nontonal context, both as a chord and as a long-range framework, for his musical depiction of Faust's psychology and state of mind. Because of its ambiguous character and tonal implications, the augmented triad was indeed used in association with magic and mystery by composers before and after Liszt.

⁴ An analysis of this passage, on which the present discussion is based, can be found in R. Larry Todd, "Franz Liszt, Carl Friedrich Weitzmann, and the Augmented Triad," in *The Second Practice of Nineteenth-Century Tonality*, ed. by William Kinderman and Harald Krebs (Lincoln: University of Nebraska Press, 1996), pp. 153–77.

F. Liszt, Faust Symphony, I, mm. 1–22



PRACTICAL AND CLASS DISCUSSION

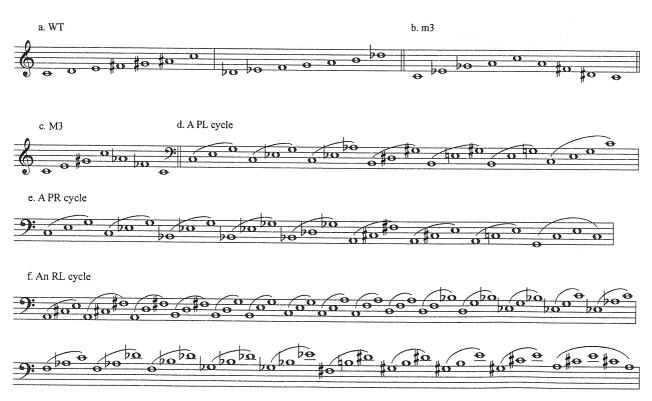
In this chapter we have studied various harmonic techniques that contribute to the weakening of functional tonality. In some cases, functional tonality disappears altogether. How is tonal and harmonic coherence achieved in this type of composition in which functional relationships are missing? From our discussions, you will have noticed that linear relationships and stepwise voice leading are frequent elements of coherence in this type of nonfunctional harmonic language. Another possible factor of coherence is the symmetrical division of the octave into equal segments.

Discuss how melody and harmony are intertwined in the *Tristan* prelude. What has priority in Wagner's example, melody or harmony? The sense of forward motion (quite overwhelming!) in Wagner is created by numerous elements that constantly pile up tension. What are these elements? Although the music moves by itself, performances of the prelude vary enormously. Whereas some of them stress and play up the tension, others fall short of communicating and expressing the emotional and dramatic conflicts this music contains. If you were a conductor, how would you try to convey the dramatic power of this music? What elements would you use to your advantage to keep the music alive and moving forward? Would our above discussion of the piece help you in any way for this purpose?

PITCH PATTERNS

Sing the pitch patterns in example 31.16, which feature equal divisions of the octave.

Example 31.16



FOR FURTHER STUDY

For additional chapter 31 materials, refer to the Harmony in Context Web page at www.mhhe.com/roigfrancoli2e.

ASSIGNMENT AND KEYBOARD EXERCISES

For analytical and written assignments and keyboard exercises based on the materials learned in this chapter, refer to chapter 31 in the workbook.

Terms for Review

Tristan prelude

Leitmotif

Tonal ambiguity

Implied tonality

Tonal fluctuation

"Tristan chord"

Double-tonic complex

Equal divisions of the octave: chromatic scale, whole-tone scale, cycle of minor

thirds, cycle of major thirds, tritone

PLR model

Parsimonious voice leading

Tonnetz

PLR binary operations: PL, PR, and LR



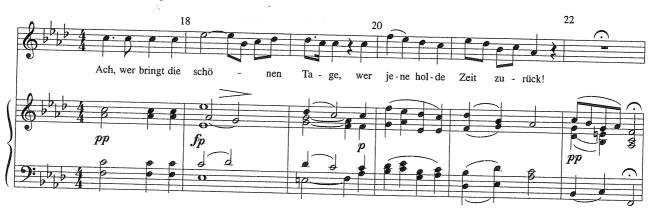
Worksheet 31

EXERCISE 1 Analysis.

1. Example 31.17. On a separate sheet, write a brief essay explaining the tonal ambiguity of this passage (which reflects the tonal ambiguity of the complete song). Does the term *double tonic complex* apply to this phrase? A translation of Goethe's poem on which the song is based is provided. How do the tonal characteristics of this phrase (and of the song) reflect the meaning of the poem?

🗘 Example 31.17

F. Schubert, "Erster Verlust," mm. 17-22



First Loss

Oh, who will bring back the fair days, Those days of first love, Oh, who will bring back but one hour Of that sweet time!

Lonely I feed my wound, And with ever-renewed lament I mourn the lost happiness.

Oh, who will bring back the fair days, That sweet time!

- 2. Example 31.18. On a separate sheet, write a brief essay on this example, discussing the following:
 - a) Explain the tonality of this excerpt. What are the keys? How are they established? What are the elements of tonal ambiguity?
 - b) How does melody obscure harmony in this example?
 - c) Explain the following specific passages from a harmonic point of view: mm. 1–4, 5–8, 10–12 (What key is implied in these measures?), and 13–15.
 - d) This collection of songs dates from 1901–1904. What specific influences from Wagner and *Tristan* can you identify in this fragment?

Gustav Mahler, "Nun seh' ich wohl, warum so dunkle Flammen," from Kindertotenlieder, mm. 1-15



- 3. Comment on root and triad relationships in the following examples.
 - a) Example 31.19.

C. Franck, "Choral no. 1 Pour Grand Orgue," mm. 19-23



b) Example 31.20. In this example, focus on the relationship among tonicized triads.

Example 31.20

F. Chopin, Nocturne in GM, op. 37, no. 2, mm. 129-132



4. Refer to anthology, no. 51, Liszt, *Consolation*, no. 4. Determine the key areas in mm. 6–9 and 10–17. Explain exactly how these keys are related by PLR transformations. For this purpose, it will be useful to consider the modulation in m. 14 as passing through AM before moving on to F#m.

EXERCISE 2 On your own music paper, write four different progressions using equal divisions of the octave, in the following keys, respectively: EM, D,M, Am, and Fm.

EXERCISE 3 Write the following parsimonious progressions in four voices: (1) a PL progression, (2) a PR progression, and (3) an LR progression. Begin each of the progressions on a Bbm triad. (Use your own music paper for this and the following exercise.)

EXERCISE 4 Write a phrase for piano (melody and accompaniment) based on a PR parsimonious progression, beginning on an Fm triad.

Appendix

Transposing Instruments

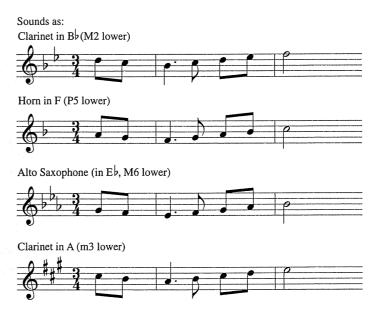
If you play a scale notated as CM on a flute, an oboe, a bassoon, a trombone, a violin, or a variety of other instruments, what you will hear will actually be a CM scale. This statement would be trivially obvious if it were not that you do *not* hear a CM scale in many other instruments when you play what is notated like one. A scale notated as CM will sound a M2 lower (sounding like a BbM scale) when played on a clarinet in Bb. Or it will sound a P5 lower (sounding like an FM scale) when played on a horn in F. These are what we call **transposing instruments**. In all these instruments, the actual sounding pitches are not the same as those notated. Example 1 shows how some common transposing instruments would sound if they all read the same opening of our familiar "The First Noël" notated in CM. As you will see, if they all played together from the same score in C, the resulting sound would be quite interesting indeed! The following comments refer to this example:

- 1. When we say that an instrument is "in Bb" we mean that if that instrument plays a notated C the actual sound (or "concert pitch") will be Bb. A clarinet in Bb sounds a M2 lower than notated. We hear both the pitches and, therefore, the key, transposed down a M2.
- 2. When we say that an instrument is "in F" we mean that if that instrument plays a notated C the actual sound will be F. A horn in F sounds a P5 lower than notated. We hear both the pitches and, therefore, the key, transposed down a P5.
- 3. Based on these two examples, explain what we mean when we say that an instrument is in Eb or in A, and what we hear exactly when an alto saxophone (in Eb) or a clarinet in A plays our tune notated in CM.

Example 1 shows how you should read transposing instruments when you find them notated on a score. Writing for these instruments, however, presents the opposite problem. Example 2 shows how we should notate a melodic fragment from

Example 1

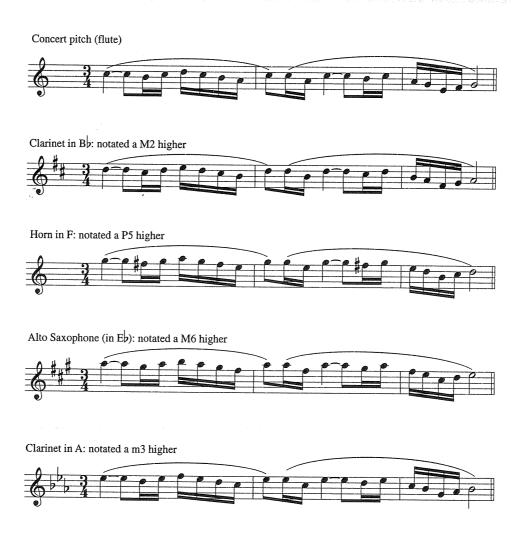




Maurice Ravel's *Bolero* if we want it to sound "in C" on the same transposing instruments we discussed previously. If these instruments now played this fragment as notated for each of them, the resulting sound would be a unison line in CM. The following comments refer to this example 1:

- 1. If you want a clarinet in Bb to sound a Bb, you need to write a C. To notate a line for clarinet in Bb, you should then transpose it a M2 higher. The same applies to the key signature: if the resulting key is CM, you should notate the clarinet's key signature transposed a M2 higher, in DM.
- 2. If you want a horn in F to sound an F, you need to write a C. To notate a line for horn in F, you should then transpose it a P5 higher. Of course, the key will also be transposed a P5 higher, but, by an old notational convention, we do not write a key signature in French horn parts. Instead we write the accidentals before each note. In example 2, you will see that the horn has been indeed transposed to GM, but we write the necessary sharp signs before each F, rather than in the key signature. This convention applies only to the French horn and does not affect any other transposing instrument.

⇒ Example 2



3. Now comment on how (and why) we should notate the same line for an alto saxophone in E_b and a clarinet in A, based on example 2.

The following table provides a summary of transpositions in the transposing instruments most commonly found in orchestras and bands (other transpositions are possible for instruments such as the horn and the trumpet). The following instruments are in C, and hence are written in concert pitch: flute and piccolo (notated an octave lower than it sounds), oboe, bassoon, contrabassoon (notated an octave higher than it sounds), trumpet in C, trombone, tuba, and all string instruments (the double bass is notated an octave higher than it sounds).

Transposing Instruments

Instrument	Sound with Respect to Notation	Transposition Needed to Notate
English horn (in F)	P5 lower	P5 up
Clarinet in B	M2 lower	M2 up
in A	m3 lower	m3 up
in Eb	m3 higher	m3 down
Bass clarinet in B	M9 lower (M2 $+$ 8ve)	M2 + 8ve up
Soprano saxophone in B	M2 lower	M2 up
Alto saxophone in E	M6 lower	Мб ир
Tenor saxophone in B	M9 lower $(M2 + 8ve)$	M2 + 8ve up
Baritone saxophone in E	M13 lower (M6 $+$ 8ve)	M6 + 8ve up
Horn in F	P5 lower	P5 up
in Eb	M6 lower	M6 up
in E	m6 lower	m6 up
in D	m7 lower	m7 up
Trumpet in B	M2 lower	M2 up
in D	M2 higher	M2 down

EXERCISE 1

- 1. Suppose that the melody in exercise 1a, from Felix Mendelssohn's Violin Concerto, II, is to be performed as notated by a clarinet in Bb, an English horn, and an alto saxophone. Write, in the spaces provided, what the melody would sound like as played by each of these instruments.
- 2. Suppose that you need to write the Polish folk tune in exercise 1b to be performed in unison by a soprano saxophone, a horn in F, and a clarinet in A. In the spaces provided, write the correct part for each of these instruments as they would have to perform it in order for the melody to sound in FM as notated in the given version. Notice the accidentals in this melody, and make sure you transpose them correctly.



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